FUSIONX – SP4 MARCH 2023



DHLOGGER

HOW-TO DOCUMENTATION

DATAMINE SOFTWARE



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PURPOSE

DHLogger is designed to collect, store, analyze and report all drilling and sampling data collected. It can be run in a standalone configuration, but its capabilities are enhanced by running in a client server configuration bundled with our Fusion Central and Fusion Remote databases.

PREREQUISITES FOR USING THE APPLICATION

USER PROFILE PERMISSION

Accessing the DHLogger application can be done with any configured user. However, user profiles ensure access to modules is limited to qualified personnel. User profiles can be assigned in the User Administrator window within Fusion Administrator.

User Profiles		
Profile	Application	Description
ADMINISTRATOR	FUSION	
ADMINISTRATOR	REPORTMANAGER	Full access to all windows and controls
ADMINISTRATOR	SAMPLESTATION	Full access to all windows and controls
CERTIFIED PERSON	FUSION	User with access to Authorize holes and samples in Local and $C\varepsilon$
DESTINATION COMPOSITOR	DHLOGGER	Full access to Destination Compositor
FIELD GEOLOGIST	DHLOGGER	Access to full system except lookup tables (Lists)
		· · · · · · · · · · · · · · · · · · ·
S		>

DATABASE CONNECTION

DHLogger runs against a DHLogger database hosted on the local computer. If DHLogger is running in a client server environment, drill hole data can be checked in and out of our centralized Fusion Central and Fusion Remote databases.

Logging of drill hole data can be performed directly against the Fusion Central and Fusion Remote databases provided the user is granted the "LOG AGAINST CENTRAL AND REMOTE" profile.



OVERVIEW

LAYOUT

The most frequently accessed modules have been categorized and can be accessed from the collapsible **Menu Bar** located on the left side of the main window. DHLogger consists of seven main groupings, with the remaining utilities and activities placed under *Other Options*.

DHLogger will open to the "Latest News" window, which contains information about the Fusion solution from Datamine, as well as Resources and Contact information.

The list of Recent Holes can be used to navigate directly to one of the last 15 holes that have been modified.

A Tip section shows information that may help you with your logging workflow.





LOG: DRILL HOLES

Drill hole information is entered in DHLogger on the Drill Hole window.

Open the Drill Hole window by clicking the Log > Drill Holes menu.

NOTE: DHLogger must be connected to the Local Database to be able to access this window.

DHLO	gger	\bigcirc
L		
ø	Log	~
	Drill Holes	
¢	Planned Drillholes	
÷¢	Blast Holes	
	Standalone Tables	

roject: 2017-BASIN 🗸 Basin 2017	Hole No: DH1-001	🖌 🕀 🗎 🛟 New	-≣ ∎-
Drill Hole			\odot
Hole No:	Hole Type:	Hole Size:	
DH1-001	DD	✓ AQ	~
Location:	Core Storage:	Casing:	
Surface	V Mine Site	Left in hole	~
Claim No:	Section:	Unit of Measure:	
:		METRIC	~
Unit of Degree:			
DECIMAL	~		
Collar Coordinates			\odot
Collar Coordinates Coordinates: No Coordinates			\bigcirc
Collar Coordinates Coordinates No Coordinates Collar Survey			
Collar Coordinates Coordinates: No Coordinates Collar Survey Azimuth Dec:	Dip Dec:		©
Collar Coordinates Coordinates: No Coordinates Collar Survey Azimuth Dec: 300.00	Dip Dec: 45.00		©
Collar Coordinates Coordinates No Coordinates Collar Survey Azimuth Dec: 300.00 Bearing:	Dip Dec: 45.00 Scribe Line:		©
Collar Coordinates Coordinates: No Coordinates Collar Survey Azimuth Dec: 300.00 Bearing:	Dip Dec: 45.00 Scribe Line:		 ○ ○
Collar Coordinates Coordinates: No Coordinates Collar Survey Azimuth Dec: 300.00 Bearing: Drilling	Dip Dec: 45.00 Scribe Line:		 <
Collar Coordinates Coordinates: No Coordinates Collar Survey Azimuth Dec: 300.00 Bearing: Drilling Contractor:	Dip Dec: 45.00 Scribe Line:	Start Date:	© ()
Collar Coordinates Coordinates: No Coordinates Collar Survey Azimuth Dec: 300.00 Bearing: Drilling Drilling Contractor: Longyear Ltd	Dip Dec: 45.00 Scribe Line: Logged By:	Start Date: 2019-05-23 14:12:25	

The drill hole window is separated into tabs or modules, accessible on the left-hand side. The modules that are visible are determined by the user's logging style configuration.



Collar

•This section is where drill holes are entered into the system and the properties of the drill hole are logged.

Details

•The details module is used to log Major and Minor Interval data for the hole as well as additional tables to log interval and non-interval related data about the drill hole. The tables displayed in the Details module can change based on the logging style configuration.

Samples

•The samples module on the Drill Hole window contains all of the sample and assay data associated with a particular hole. It may also contain calculated results including weighted averages if so required. Note the appearance of this screen will vary depending on which Sample Type is selected and which Business Unit you are currently a member of.

Composite Samples

•The composite samples module on the Drill Hole window contains all of the composite sample data associated with a particular hole. Note the appearance of this screen will vary depending on which composite Sample Type is selected and which Business Unit you are currently a member of.

LAS

•The LAS (Log Ascii Standard) module provides a fully reproducible, tracked and auditable means for users to store and manage down hole probe data that is obtained in the form of an LAS file.

Depth Adjustment

•The Depth Adjustment module allows users to visually adjust drill log interval data for the hole against measured geophysical data.

TABLE STATUS HEADER

A Status Header will appear in drill holes that do not have a status of 'NEW'. This header will inform you of the current table's status (eg. COPY – Table edits can be made and saved but will not be transferred to the Fusion Remote or Central database).

Drill Hole from	: (0.00) to: (12.00)			
Project	2017-BASIN Basin 2017	Hole No: DH1-002	🗎 į 🛟 🚥	□ ≡- ×
1	COPY - Table edits can be made and saved, but will not be transferred	to Fusion Remote or Central database		
Collar	Drill Hole			ي ۲
旧	Hole ID:	Hole Type:	Hole Size:	
Details	Location:	Casing:	Claim No:	



DESURVEY / TABLE LINKING INFORMATION

An orange or yellow **Information** icon ('i') may appear in the header of the drill hole window. Orange denotes possible data changes impacting tables that store desurveyed data. Yellow indicates the hole's original business unit contains table linking configurations. Orange will take precedence over yellow.

Hovering over the icon displays a tooltip with details.

i (🕽 New
Perfor	m Desurvey: Coordinate / Direction may have been updated
Table	Linking Configurations
HOLE	INTERVAL: · DRILL_HOLE_MAG_SUS (AUTOMATIC) · HOLE_ASSAY_SAMPLE (AUTOMATIC)

QUICK TRANSFER

With the consolidation of functions previously found in Fusion Client, the ability to do a quick check in or check out of a drill hole is available from the Drill Hole folder by pressing the **Fusion Transfer** icon. The transfer is attempted, with the action determined based on the current status of the drill hole in the Local database, and it uses the Default DSN that is set in the *Data Transfer > Synchronization Settings*. The hole becomes temporarily locked for edits until the transfer action is complete, and if successful the hole will unlock and the status of the drill hole will change to CHECKEDOUT or COPY, depending on the action. At the completion of the transfer, a notification will appear at the bottom right of the screen.



NOTE: Quick Transfer is disabled in an environment where Selective Transfer is enabled, to ensure the active selection of tables.

DATA LOG

A quick view of a drill hole's logged data can be accessed from the **Data Log** which slides out from the right-hand side of the window, partially over top of the current window – it is available from within each module. The Data Log provides a glimpse of the data that is logged in the tables that are configured to the user's current logging style. This view can be printed or saved to file. For a fully customizable graphical view of the data, use the **Graphic Log** utility.





CORE PHOTO MANAGER

Core Photos can be added, viewed and edited in the **Core Photo Manager** which slides out from the right-hand side of the window, partially over top of the current window – it is available from within each module. The Core Photo Manager allows you to add photos, record depths for the photos and import a reference to them into the DRILL_HOLE_CORE_PHOTOS table. The photos will be renamed and copied to a defined Storage Location.

DHLogger (L	.ocal database) - [Drill Hole	e from: (0.00) to: (58.00)]							- X
Project:	2017-BASIN	- Basin 2017		Hole No:	DH1-001	+	🗎 🛟 New	=	- X
					Core Photo	Manager - V	iewing from Local Storage Lo	ocation	
	Drill Hole		\bigcirc	-	Core r moto	inanager v	iennig nom zotal otorage z		
Collar					A Stark	AC IN	MA STOPH	English and the for	P
	DH1-001		A	A State State	a strict				Ø
	Location:						Carl States	All Parts	
Details	Surface			1.01.10.20	Ser Partie				
	Claim No:			March 1 Du		in the second			
Samples			_			41 A.S.	WELL AND AND AND AND AND		1
Sumples	Unit of Degree:							The State of the	$\overline{\mathbf{v}}$
	DECIMAL			and the second		and and a start	30.0		
	Collar Coordinates								
					in the trease	And Income in the second	the second s	A CARLER AND	
	No Coordinates		-						
				<				>	
	Collar Survey			Hole Number	Depth From	Depth To	Core Photo Name	Original Photo Name	
	Azimuth Dec:			DH1-001	29.60	34.69	DH1-001_F29.60_T34.69-01.png	Box1_29.60-34.69.png	
	300.00			DH1-001	34.69	39.30	0H1-001_F34.69_T39.30-01.png	Box2_34.69-39.30.png	
	Bearing:			DH1-001	39.30	44.07 [0H1-001_F39.30_T44.07-01.png	Box3_39.30-44.07.png	
				DH1-001	<mark>44.0</mark> 7	53.19	0H1-001_F44.07_T53.19-01.png	Box4_44.07-53.19.png	
	Drilling								
	Drining								
	Contractor:			<					>
	Longyear Ltd		-						
	Completed:			e					

FORMATTING THE DRILL HOLE TAB

The layout of fields that appear on the Drill Hole tab can be configured by the end user by placing the form into Edit Mode.

Click the right mouse button on the Drill Hole tab to open the menu. Then choose the 'Toggle Edit Mode' menu item.



Or alternatively, choose Toggle Edit Mode from the Options menu list.





The fields are placed into a grid that allows the user to easily drag and drop them to the desired location and expand them across multiple columns.

roject: 2	017-BASIN	Basin 2017	Hole No: DH1-001	• 🕂 🗎 🛚		┖┛≣╸
	Column 1	Column 2	Column 3	Column 4	Column 5	Column
D						
h h	ole_number	hole_type_code	hole_size_id			
😐 h	ole_location	core_storage	casing			
cl	laim_number	section	uofm_code			
u u	ofd_code					
•• •	ollar Coordinates Header					
c.	_coordinate_string	c_coordinate_string	c_coordinate_string			
nples c	ollar Survey Header					
a	zimuth_decimal	dip_decimal				
se	ection_bearing	reference_line_angle				
D	rilling Header					
c	ontractor_id	entered_by	start_date			
co	ompleted_date	entered_on	final_depth			
с	omments Header					
co	omments	comments	comments			
D	rill Hole Details Header					
co	ollar_survey_taken	pulse_em_survey_taken	multi_shot_survey			
is	_making_water	gas_intersected	verified			
is	_hole_plugged	is_cemented	object_in_hole			
c	ustom Header					
	Ĥ	٦			<u>ର</u>	•••
	\mathbf{U}		\odot			

Headers can be added and removed, and the header title can be renamed.

NOTE: Customization can also be performed on any of the Form views in the Details and Samples modules by setting the form into Edit Mode. However, headers are only available in the Collar form.

INSTRUMENT CONNECTION

If instruments have been configured in Fusion Administration, geologists will be able to connect to an instrument to receive data directly into the current numeric or string column in the Drill Hole module.

To establish a connection with a specific instrument choose **Connect to Instrument** from the **Options menu list.**





Select the instrument you wish to connect to and hit the Connect button.

Connect to Instrument
\odot \otimes

Once a connection is established, the title of DHLogger will be updated to show the currently connected instrument.

DHLogger (Local database) - [Drill Hole from: (0.00) to: (75.00) Instrument: Denver]

Now place your cursor in the numeric or character column you would like to receive data. Push the print button on the instrument to send the value to DHLogger.

NOTE: Data can only be received while in the Drill Hole window in DHLogger.

CREATING A NEW HOLE



Enter a unique hole number. The hole number field supports letters, numbers, space, and special characters except the following:

- Single quote '
- Double quote "
- Comma,
- Semicolon;
- Tilde ~
- At @
- Pound #



Populate remaining drill hole data and required columns.

NOTE: Required fields display with a red title.

LOGGING INTERVALS

Once the drill hole has been created, logging interval data can begin.

Click the Details module. The major and minor intervals will appear as a graphical representation in the two panes on the left side of the window. If minors are not configured, then only the Major Geology will be displayed.

Drill Hole from	a: (0.00) to: (49.00)								
Project	: 2017-BASIN 🗸 Basin 2017		Hole	No: DH1-001	¥ (†) 🗉 🔇	D NEW	▝⊒ ≣▪	×
1	Active Table: Interval		<u> </u>	ightarrow) 🙆 🏛) (=)			•
Collar	Major / Minor Geology	Form						\bigcirc	Date
	Epidote 5.00	Depth	From		Depth To		Rock Type		log
Details	Sericite 10.00	C		• 00.	Attack File		10.00 ÷ Epidote	<u>~</u>	
	10.00		ints		Ø				
Samples	Breccia	1	of 9	(*	-)		(\rightarrow)		
	20.00	List			~		(
	27.00		Depth From	Depth To	Rock Type	Colour	Comments	Attach File	\langle
	Aplite Greywacke 32.00	•	.00 📮	10.00 🚑	Epidote	~		Ø	
	35.00	1.1	.00	5.00 🜲	Basalt	~		Ø	8
	35.00		5.00	10.00				0	
	Silicified	1.1	5.00 📮	10.00	Sericite	~		<u>U</u>	8
	Silicified 40.00		10.00	20.00	Breccia	× ×		0	oto Man
	Silicified 40.00 40.00		10.00 ÷	20.00 ÷	Sericite Breccia Gossan	>		U U U	oto Manager
	Silicified 40.00 Gossan		10.00 + 20.00 + 27.00 +	20.00 ÷ 27.00 ÷ 35.00 ÷	Sericite Breccia Gossan Aplite	> > >		0	oto Manager
	Silicified 40.00 Gossan 49.00	• •	10.00 ÷ 20.00 ÷ 27.00 ÷ 35.00 ÷	20.00 ÷ 27.00 ÷ 35.00 ÷ 40.00 ÷	Sericite Breccia Gossan Aplite Silicified	 		0 0 0 0	oto Manager

The Details Toolbar is used to move between tables, add, copy, delete, and split records, and select multiple records with the use of checkboxes.



Logging Interval Data

If necessary, select "Interval" from the Active Table pick list, and you will see that both a Form (single record) and List (multiple records) view of the interval data is displayed.



Click the New button to add a new interval.



Data can be entered into either the Form or List view, depending on preference, but if data is entered in both, when the record is saved the information from the Form overwrites the information in the List.

Form		\bigcirc
Depth From 49.00	Depth To 58.00	Rock Type
Comments	Attach File	
10 of 10	9)

Required Fields: Depth From, Depth To and Rock Type

The Depth From column must be less than the Depth To column and must not overlap existing intervals. If adding a minor interval, both depth values must exist within a major interval range.

Use the Rock Type picklist to select the Rock Type from the Rock Type Selection tree.

Additional Fields

Comments can be entered, and photos/images can be added to the interval by using the "Attach File" button that opens an image viewer.

This table can be configured with additional custom columns, allowing for the storage of other necessary interval-related information.

Click the Save button beside the Hole Number to save the drill hole. The new interval will be represented graphically in the "Major/Minor Geology" pane.

To copy a row, select the row in the List view and click the New From button. The columns from the selected row will be copied, but the depths will be set to the values that would be used during a manual insertion.

To delete an interval, select the interval in the pane, or in the List view and click the Delete button.





NOTE: Major Intervals can't be deleted if child or interval-related data exists for the interval – this data must be deleted first. If deleting a Major Interval where a gap would be introduced,



the depths of the two surrounding Majors will be automatically adjusted to equally distribute the deleted interval's length to each. For example, deleting an interval from 10-20 will set the previous interval's "Depth_To", and the following interval's "Depth_From" to 15.

To split an interval, select the interval from the pane or list view and click the Split button. Specify where the split should occur within the interval range and click OK to accept the change.

Interval Split Depth	×
Split Depth:	
	53.50 🚔
ОК	Cancel

Things to Know about Intervals in DHLogger

- 1. Minor Intervals must be associated to Major Intervals as sub-units.
- 2. Major Intervals must be defined prior to adding Minor Intervals to them as sub-units.
- 3. Minor Intervals typically describe small or less significant core properties such as alteration or minor lithology. They should therefore be used as much as possible to provide added flexibility during downstream analysis and viewing.
- 4. All Texture, Structure, Alteration, and Mineralization records are generally linked to specific Major and Minor intervals, unless otherwise configured.
- 5. All RQD (Rock Quality Descriptor), Magnetic Susceptibility, Direction, Coordinates, and Wedge Records are generally linked directly to the drill hole itself rather than an interval, unless otherwise configured.
- 6. New intervals will have the same length as the last defined interval, however this can be easily changed by editing the Depth To value to make the interval longer or shorter.
- 7. The Depth To value must always be greater than the Depth From value.
- 8. Major Intervals must form a continuous, non-overlapping string in the core record for any single hole and there are absolutely NO EXCEPTIONS to this rule.
- 9. In the event there are gaps in your core record, a "No Core Available" rock type or something similar must be created and used to represent such intervals in the Details view. Failing to do so will not allow intervals beyond the gap to be defined since the core record **must be continuous** in DHLogger.

LOGGING DETAIL DATA

Standard and custom drill hole and interval related tables will appear in the "Active Table" picklist in the Details module on the Drill Hole window. The tables displayed are dependent on the configuration of the current logging style for the logged in user.

Navigation through tables can be done using the picklist or the Next and Previous arrows that will switch to the next or previous table in the picklist, relative to the current table. (ALT + P, ALT + N can be used to navigate to previous/next tables)

Hovering over the arrows will display a 'tooltip' that shows the name of the corresponding table.

To Collapse or Expand the Form and/or List View, use the arrow on the corresponding band.

An additional layout option is to hide the form and band completely using the 'Show/Hide Form' button on the List band.

On the List band another button allows for saving the List window into an external format (eg. TXT, CSV, XLS)

To add a new detail record, select the desired table and click the new button. A new record will appear in the Form view, and a new blank row will appear in the List view of the selected table. Enter the appropriate data and click Save.

NOTES:

When entering records in an interval-related table, DHLogger will attempt to automatically assign the data to a Major interval. If no interval can be found because depths do not fit within an existing interval, you will be informed of this with a pop-up message.

If you want to enter a record for a Minor interval, you will need to specifically select the interval from the Major/Minor Geology pane before adding the record.

Drag-Insert and Drag-Overwrite functionality exists to quickly and easily add new data or overwrite multiple rows and columns at the same time.

To add new rows, in the List View, hold the left-mouse button down in the last row, highlighting the columns that you want to copy, and drag down to add more rows.

To overwrite data, in the List View, hold the left-mouse button down in the row and column(s) that you want to copy values from, and drag up or down to the rows you want to update. A prompt will be presented to confirm or cancel the action.

DHLogger











LOGGING SAMPLES

The Samples module contains all the sample and assay data associated with the selected hole. It may also contain calculated results including weighted averages, depending on configuration.

DHLogger ((Local database) - [Dri	ll Hole from: (0.00) to	(58.00)]							- 0	×
Project:	2017-BASIN	✓ Basir	2017	Hole N	DH1-001	~	+			┖┛≣᠇	×
1	Sample Type:	ASSAY	• (+)	b (7)							
Collar	Major / M	inor Geology	C Form		_	_	_	_	_		Dat
Details	0.00 Epidote 10.00 10.00	0.00 Basalt 5.00 Sericite 10.00	Sample Number DH1-001-001 Comments	Depth	From	.00	Depth To	2	Length	2.00	ta Log
Samples	Breccia 20.00 20.00 Gossan		1 of 10 List	_	Θ		=	\ominus	Ē		
	27.00	27.00 Greywacke	Sample Number	Depth From	Depth To	Length	Ag Gpt Lab	Au gpt	Cu_Per	Co ^	
	Aplite	32.00	DH1-001-001	.00	2.00	2.00		.8000	.2400		
	35.00		DH1-001-002	2.00	4.00	2.00		2.0200	1 2200		
	Silicified 40.00		DH1-001-004	4.00	8.00	2.00		2.4700	2.8800		
	40.00		DH1-001-005	8.00	10.00	2.00		.5800	6500		
	Gossan		DH1-001-006	10.00	12.00	2.00		1,2000	.3600		
	49.00		DH1-001-007	12.00	14.00	2.00		2.7700	.8500		
	Argillite 58.00					(TERCOR)				× >	
			(٩	٨) 🐻		

NOTE: The appearance of this screen will vary depending on which Sample Type is selected and which Business Unit you have currently chosen to be active.

To add a new sample, select the Samples tab and pick a non-qc Sample Type from the picklist. Click the New button. A new row will be added to the Form view (which may or may not be expanded) and to the List view. A default sample number using the hole number and a threedigit sequential number will be assigned unless a sample naming template is specified. Sample number field supports letters, numbers, space, and special characters except the following:

- Single quote '
- Double quote "
- Comma,
- Semicolon;
- Tilde ~
- At @
- Pound #

Templates are defined in the Sample Naming Template reference table in Fusion Administrator. And, support for special characters has been extended to Sample Naming Template as well.

Enter the appropriate information into the required fields and click the Save button to save the sample.



The Form view, which is only visible when a Sample Type is chosen (not "(Show All)"), is built with only editable and calculated fields displayed.

Generating Regular and Weighted Averages



The Worksheet feature is used to calculate regular or weighted averages for a given set of samples. It also enables users to save these results to the database for later use, print hard copies of them or export them to file formats used in other programs.

From the Samples tab, clicking on the Worksheet button will open a new window from which to perform calculations.

)						5	Sample Worl	ksheet - Ho'	le: DH1-001					×
Average Type	,		Dept	.h From		Dep	/th To			Use Cutoff	values			
WEIGHTED										•				
New Averag	<u>je</u>													
Depth From	Depth To	Length	Ag Gpt Lab	Au Gpt Lab	Cu Per Lab							^	Result Column Name	Cutoff Value
8.00	10.00	2.00	(Ag_gpt_Lab	10.00000
10.00	12.00	2.00	1										Au_gpt_Lab	5.00000
12.00	14.00	2.00											Cu_Per_Lab	
14.00	16.00	2.00												
												*		
Depth From	Depth To	Length	Ag Gpt Lab	Au Gpt Lab	Cu Per Lab									
10.00	16.00	6.00	1											
Saved Aver	20005													
Sandaran	iges													
	Hole N	umber		Sample Tyr	pe Average Type	Depth From	Depth To	Length	Ag Gpt Lab	Au gpt	Cu_Per			
DH1-001				ASSAY	WEIGHTED	0	4.00	4.00						
DH1-001				ASSAY	WEIGHTED	4.00	10.00	6.00						
	_	_	_	_	_	_	_	_	_	_	_	_		_
												E	A	

Select the Average Type you wish to calculate. There are three average types available. Regular, SG Weighted, and Weighted



Regular

•The average is found by adding all grades together and dividing them by the total number of samples.

SG Weighted

•The average is found by dividing the sum of the products of individual grades, interval lengths and specific gravity by the sum of the products of the interval lengths and specific gravity.

Neighted

•The average is found by dividing the sum of the products of individual grades and interval lengths by the total interval length.

Select the start and end sample of the interval to be averaged in the New Averages section. All the entries between these starting and ending samples will be included in the calculations.

NOTE: Partial intervals may be included in the averaging calculations by typing the start and end depth to be averaged into the Depth From and Depth To fields. These depths don't have to match the interval depths.

Check the Use Cutoff Values checkbox to limit interval grades to their cutoff values when performing the averaging calculations.

NOTE: Gaps in sample data over the averaging interval length are also included in the calculations and are weighted at zero grade.

An additional calculation of 'Horizontal Length' is automatically performed when a new average is created. The sample horizontal length is calculated using the dip closest to the starting depth with the highest-ranking survey type, and the following formula:

HorizontalLength = ATAN(((90 - ABS(Dip)) * Pi(1)/180))*(DepthTo - DepthFrom)



Click the Calculate Average button to calculate averages for each element type in the samples over the specified interval.



Click the Save button to save results to the database.





Click the Save As button to save the 'Saved Averages' window to an external format (eg. TXT, CSV, XLS)

Generating Samples



This feature is used to automatically generate sample records with a specified interval between a defined start and end depth.

From the Samples tab, click the Generate button.

Enter the auto generation parameters. With the information shown here, this feature will create the first sample 'DH1-001-019' at 16m deep with an interval length of 1m. The next sample 'DH1-001-020' will be generated at 17m deep with an interval of 1m. A total of 5 samples will be generated.

Generate s	amples
Start	Depth:
16.0	0
End	Depth:
21.00	0
Inter	val Length:
1.00	
Start	ting Sample:
DH1	-001-019
	OK Cancel

Logging QC Samples



This feature generates new sample numbers from existing ones for QC sample types. QC sample types are defined on the Sample Types reference table in Fusion Administrator.

Select an existing sample (which will become the Parent) and click the Quality Controls button. Select the QC sample type you wish to assign and click the OK button to add the new QC sample.



Parent Sample Number	
18-02-004	
Sample Number	
18-02-007	
Sample Type	
DUP	~
Insert Block of QC Samples	

Alternatively, instead of selecting a single sample type, you can choose to select a block of QC Samples, allowing for multiple QC Samples to be created at one time from the single parent sample. The configuration required to allow the block insertion is performed in the QC Packages module in Fusion Administrator.

Logging QC Standards



This feature is used to setup sample standards which are used to test the accuracy of laboratories. This is done by submitting a previously analyzed sample to a lab and checking their results against the known sample results.

From the Samples tab, click the Standards button

The Sample Standards window will appear displaying all standards currently associated with the drill hole.



0		Sample Standards	le Standards –						
Standards		Results							
Sample Number	Sample Standard	Element	Actual Amount	Laboratory Result					
DH1-001-016	DMS1	Ag gpt FA							
		Au gpt FA							
) (1)	(··· ··					

Click the New button to open the Hole Assay Standard window.

Hole Assay Standard	×
Standard Information	
Sample Number	
рн1-001-008	
Standard Type	Lab Reference Number
×	
Date Shipped	Analysis Date
Jan 22, 2021	
Inserted Depth	Analytical Flow
.00	~
Comments	
ОК	Cancel

Select the Standard type from the picklist. This field is populated from the Sample Standards reference table in Fusion Administrator.

Some users may add the 'Inserted Depth' which identifies at what depth in the Sampling program the standard corresponds.

If configuration has been added that uses Size Fractions and Analytical Flows, the ability to select the Analytical Flow for the Standard's analysis becomes enabled.

Click the OK button to add the standard. It will now appear in the Sample Standards window.



NOTE: Sample tags for the defined standards can be printed by clicking the Print Tags button on the Sample Standards window. Clicking on this button will bring up the Sample Tag Generator window.

Occasionally, a user may find that they made a mistake when they have selected the standard type. If the user has the "Qualified Person" profile, they will be able to make a change to the standard type, without having to delete and re-create the standard.

Standard Information	
Sample Number	
DH1-001-019	
Standard Type	Lab Reference Number
FldBlk	
Date Shipped	Analysis Date
May 23, 2019	
Inserted Depth	
15.00	
Comments	
Change Standard Type	Reason
	Incorrect Selection V
Change Standard - Comments	
Mistakenly chose FldStd, should be FldBlk	

Three fields at the bottom of the window become visible to the 'Qualified Person', allowing them to indicate the need to Change Standard Type and provide a Reason (the picklist is configured in the Object Audit Codes in Fusion Administrator).

Once those two fields are populated, the Standard Type picklist becomes enabled again, allowing the user to pick a new type, and enter comments if appropriate.

Clicking OK will save the standard with the new type, delete any results from the HOLE_ASSAY_STANDARDS table for the original standard, and flag any results in the DHL_SAMPLE_COLUMN_DETAILS as not 'active'.



Sample Number Re-assignment

Your workflow might dictate that you generate a sequence of samples at regular intervals and then go back and insert QC Samples and Standards at various positions in the set of samples. If you would like the sample numbers to appear as though the QC and Standards were entered at the same time, a system (or business unit) preference exists for this purpose: "Prompt to reassign QC Sample / Standard sample numbers".

With this setting enabled, you can autogenerate your samples, and then when inserting your QC Samples, use a sample number which has already been used in your sequence. When you do this, you will be notified of the 'duplication', but prompted to decide if you want to re-assign the samples/standards/QC samples that follow in the sequence.

Sample E	xists X
?	This sample number is in use. Do you want to attempt a re-assignment of sample numbers to fit this sample number in sequentially?
	Yes No

If you enter 'Yes', your standard or QC sample will be given the sample number, and the existing sample (and subsequent samples) will be reassigned, keeping your sequence in order.

If you enter 'No', you must give your standard or QC sample a unique, unused sample number.

There are several cases where the re-assignment of samples cannot occur, and in these scenarios, it will be disallowed:

- If the hole is not the 'Master'
- If the hole has the AUTHORIZED status (drill hole authorization)
- If the sample table has been Authorized (process flow authorization)
- If any sample that is to be 'reassigned' belongs to another hole (as a Sample, Standard or Composite)
- If any sample that is to be 'reassigned' exists as a Surface Sample or a Map Sample Object
- If any sample that is to be 'reassigned' is used as an original sample for a Composite Sample
- If any sample that is to be 'reassigned' has size fractions, density fractions or is a size fraction or density fraction
- If any sample that is to be 'reassigned' has had results imported (checks DHL_SAMPLE_COLUMN_DETAILS table)
- If any sample that is to be 'reassigned' has been dispatched (checks DHL_SAMPLE_DISPATCH_SAMPLES), unless you are a QUALIFIED PERSON, where you can override the check and allow the reassignment
- If the table is not master / has not been checked out (selective transfer configuration)



Printing Sample Tags

This option is used to produce sample tags for easy identification of samples.

Click the Print Tags button from the Samples tab or the **Sample Analysis > Sample Tag Generator** menu.





The Sample Tag Generator will open allowing the user to print tags for existing samples, or they can specify the sample number, and quantity, and the sample tag generator will create tags for those samples.

nple lag Generator	Previous Tag					_		
election Criteria	Generation Type		Generation Details		La	bel Details		
	Select Holes and/	or Samples	Database: Local			Copies:	2	
nter criteria.	🔿 Samples by Dispa	tch				Template:	DEFAULT	~
DRILL_HOLE.Hole ID	O Specify Samples		Force rotate printed t	ags				
s one of VDH1-002			Print copies in sample	order				
DH1-001	Project Number	Hole Number	Statu	≫ [Sample Number	Sample Type	Hole Number	
DH1-002	2017-BASIN	DH1-001	NEW	> 0	0H1-001-001	ASSAY	DH1-001	
×	2017-BASIN	DH1-002	СНЕСК		0H1-001-002	ASSAY	DH1-001	
~				~				
×	Drill holes: 2							
×	8 💉 🖪 🖽			S	amples: 2			
×	<		3					
×	Sample Number	Hole Number	Samp ^	» I	Drillhole Tags (2) Surface S	ample Tags		_
	DH1-001-003	DH1-001	ASSAY	7			2021-01-25	
	DH1-001-004	DH1-001	ASSAY	$\frac{1}{2}$	0 - 2.0 DH1-0	00 101		
	DH1-001-005	DH1-001	ASSAY	//	DH1-001-001			
Retrieve all on open 🛛 🗸 🗸	Samples: 6						ASSAY	
\rightarrow	8 🔗 🖳 🖪	_	~		<			>

If you wish to print tags for existing samples, choose the 'Select Holes and/or Samples' option. Users can add one or more holes by dragging and dropping the list of holes or by using the navigation buttons. Users can also add one or more samples by dragging and dropping the selected samples or by using the navigation buttons.





Specify the number of copies you would like to generate and select a template to generate. Click the Begin button to generate the sample tags.

NOTE: Sample tag templates can be created and customized on the Sample Tag Configuration window in Fusion Administrator.

Add Samples to Dispatch



The Add Samples to Dispatch feature is used to assign samples and standards to a new or existing dispatch directly from the Samples tab. Selection of standards is possible when the '(Show All)' sample type is selected, along with the 'Show

Standards' checkbox.

Add samples to Dispatch	×
Select an existing Dispatch	
	~
○ Create a new Dispatch	
Sample Selection	
Selected Samples (1)	
O All Samples and Standards in Hole (6)	
OK Cancel	

From this window, users can choose to add the samples to an existing dispatch, which has a status of NEW in the current database, or they can choose to create a new dispatch.

Users also have the choice of adding only the samples and/or standards that they have selected, or adding all the samples, composite samples and standards that are associated with the current drill hole.

After making their selections, click OK to perform the action. At this time, the user will be prompted to open the Dispatch module to continue with completing the dispatch information.



LOGGING COMPOSITE SAMPLES

This tab/module allows the creation of composite samples based on one or more short core samples allowing analysis on the group.

,	South Basin	2017	но	BING. DITI-00							
Composite Sa	ample Type Com	р		🖌 🕂 (i	i) 🗇 🛙	Raw Sample Ty	pe <mark>ASSAY</mark>		~		
ar Major /	Minor Geology	Raw	Samples				(Composite Samples			
	0.00	ō	Sample Number	Sample Type	Depth From	Depth To	Length	Sample Number	Depth From	Depth To	Length
5	Basalt		DH1-001-001	ASSAY	0	2.00	2.00	DH1-001-C001	0	8.00	8
ils Epidote	5.0		DH1-001-002	ASSAY	2.00	4.00	2.00	DH1-001-C002	8.00	14.00	e
. 1	0.00 Sericite	, 🗆	DH1-001-003	ASSAY	4.00	6.00	2.00	DH1-001-C003	0	0	
	0.00		DH1-001-004	ASSAY	6.00	8.00	2.00				
les			DH1-001-005	ASSAY	8.00	10.00	2.00				
			DH1-001-006	ASSAY	10.00	12.00	2.00				
- 2	0.00		DH1-001-007	ASSAY	12.00	14.00	2.00				
sites	0.00		DH1-001-008	ASSAY	14.00	16.00	2.00				
Gossan			DH1-001-009	ASSAY	16.00	18.00	2.00				
2	7.00 7.00 27.0	5 D	DH1-001-010	ASSAY	18.00	20.00	2.00				
Aplita	Greywacke		DH1-001-011	ASSAY	20.00	22.00	2.00				
Apine	32.0		DH1-001-012	ASSAY	22.00	24.00	2.00				
	5.00 5.00		DH1-001-013	ASSAY	24.00	26.00	2.00				
h Silicified			DH1-001-014	ASSAY	26.00	28.00	2.00				
nent 4	0.00		DH1-001-015	ASSAY	28.00	30.00	2.00				
			DH1-001-017	ASSAY	30.00	32.00	2.00				
Gossan											
4	9.00	<					>	 			

NOTE: The appearance of this screen will vary depending on which Sample Type is selected and which Business Unit you have chosen to be active.

To add a new composite sample, select a non-qc Composite Sample Type from the picklist, then click the New button. A new row will be added to the right-most list. A default sample number using the hole number and a three-digit sequential number will be assigned unless a sample naming template is specified. Sample number field supports letters, numbers, space, and special characters except the following:

- Single quote '
- Double quote "
- Comma,
- Semicolon ;
- Tilde ~
- At @
- Pound #

Sample naming templates can be defined on the Sample Naming Template reference table in Fusion Administrator. And, support for special characters has been extended to Sample Naming Template as well.

Enter the appropriate information into the required fields and click the Save button to save the sample.





Samples can be associated with a composite sample by choosing a composite sample and clicking the Select Raw Samples button. The Raw Samples section will expand allowing selection of one or more samples. A second click of the button completes the process, assigning the raw samples to the composite sample.



Quality Control samples can also be created from composite samples. Select the composite sample from which you want to create the QC sample, then click the Quality Controls button to create the new sample.



The Print Tags button will open the Sample Tag Generator window that will allow users to generate and print labels for the samples.



Users can select composite samples and use the Add Samples to Dispatch button to quickly create or modify and existing dispatch.

LOCKED DISPATCHED SAMPLES

With the "Lock Samples in Data Tables after they are dispatched" preference enabled, there are some changes to the sample logging in DHLogger and Sample Station. Once a sample (or Standard) has been identified as being dispatched, it will be locked.

Form									۵ (۵)
Sample Number	Depth From				Depth To				Length
DMT2-001				.00				2.00	2.00
Comments									
1 of 10		\odot					\ni		
List									
Sample Number	Depth From	Depth To	Length	Sg Gcm3 Calc	Cu_Per	Au gpt	Ag Gpt Lab		
6 DMT2-001	.00	2.00	2.00					AAA	
6 DMT2-004	2.00	4.00	2.00					сс	
B DMT2-007	4.00	6.00	2.00					BBB	
6 DMT2-009	6.00	8.00	2.00						
DMT2-010	8.00	10.00	2.00						
DMT2-012	10.00	12.00	2.00						
DMT2-013	12.00	14.00	2.00						
DMT2-014	14.00	16.00	2.00						
DMT2-015	16.00	18.00	2.00						
DMT2-016	18.00	20.00	2.00						

A locked Sample will have the following:

- A lock icon beside it in the list
- A lock icon in the Form band



• Sample Number, Depth From, Depth To fields are not editable

A locked Standard will have the following:

- A lock icon beside it in the list
- A lock icon in the Header band in the window that opens when you double-click to edit a standard
- Sample Number field is not editable

A locked Composite Sample will have the following:

- A lock icon beside it in the list
- Sample Number, Depth From, Depth To fields are not editable
- The 'Select Raw Samples' toolbar button is disabled

A locked Surface Sample will have the following:

- A lock icon beside it in the list
- A lock icon in the Header band in the window that opens when you double-click to edit a Surface Sample
- Sample Number field is not editable

As a user without QUALIFIED PERSON profile:

- Fields (Sample Number, From, To) are not editable
- Samples, Standards and Composite Samples cannot be deleted
- Surface Samples can only be deleted if they are not the master version (ie. is a copy)
- Sample Numbers cannot be re-assigned, impacting the ability to insert standards and QC samples into a sequence

As a user with QUALIFIED PERSON profile:

- Locked samples can be unlocked by clicking on the Lock icon
 - (exceptions are Standards and Surface Samples, where the object must be opened with a double-click and then you can click on the Lock in the Header Band)
- When a sample is unlocked:
 - The lock icon changes to 'open'
 - Sample Number, Depth From and Depth To fields become editable
 - \circ Composite Samples will have the 'Select Raw Samples' toolbar button become enabled



- If an unlocked sample is locked again, the changes are discarded and re-set to values prior to unlocking
- If an unlocked sample is saved, the old and new values are stored in the DHL_AUDIT_LOGGING table
- A locked sample can be deleted, but you will be prompted to confirm the deletion; and auditing will occur
- If a sample, standard, or composite sample is locked, it can not be renamed during reassignment

LOGGING CORE PHOTOS

Core Photos are added in from the Core Photo Manager slide-out in the Drill Hole module. It is initially opened in 'Viewer' mode showing the current hole's records from the drill_hole_core_photos table.







Switch to the Import window to add photos to the Drill Hole



Opens a window to select a datasource. This will allow you to view the photos (load the image file) from the Storage Location that is defined in the selected datasource's database. This gives you the ability to view the photos from a centralized source, and means that you are not required to download the photos that other users upload when you check out or copy out holes to your local database.

Viewer Toolbar functions:







Navigation buttons to cycle through the list of imported photos.

New or Checked Out. The data will be removed from

DRILL_HOLE_CORE_PHOTOS table, and if the System/Business Unit preference is enabled, the photo file itself will be deleted from the Local storage location.

Delete button to remove the associated photo from the drill hole, if the hole is



If the drill hole's data is editable (New or Checked Out), the Depth From and Depth To data can be edited. When this occurs, the photo will be renamed to reflect the new depths.



If you are editing the depths of a photo record, the Save button is required to be pressed to commit the changes and rename the photo. When not editing the depths, pressing the Save button will result in a new row with the same depths, but an incremented photo_name being added to the DRILL_HOLE_CORE_PHOTOS table.

Image Editor Toolbar functions:



Zoom In, Zoom Out: Use to adjust the magnification of the photo. This does not affect the saved image, it is a viewing tool only, not an editing tool.

Rotate Clockwise, Rotate Counter-Clockwise: Used to rotate the image 90 degrees at a time (clockwise or counter-clockwise). This is an editing tool, so rotated images can



be saved in their final state.



×

Free Draw: An editing tool that allows you to markup the photo with free-hand drawing and writing. A separate toolbar will appear with brush colour selection and Done buttons.

Undo All Changes: Used to revert the image back to the original state, un-doing all changes made since the image was loaded.





Switch to the Viewer window to see the photos that have been added to the Drill Hole.



Import Toolbar functions:





Navigation buttons to cycle through the import list of photos.

Use the Add button to select the photos from a location on the local computer, to be added and imported to the drill hole. Records will be added with the depths either ZERO or EMPTY, depending on the system preference setting.

Use the Delete button to remove photos that have not yet been imported, or were just imported to the drill hole. Whether the photo image itself is deleted depends on a system preference setting.

Use the Import button to finish the process of associating images to the drill hole. This can be done after you have entered valid depths for each photo. On completion of the import, the image will be copied and renamed in the local Storage Location.

LINKED TABLE SYNCHRONIZATION

Administrators can configure links between a "source table" and one or more "dependent tables" that will maintain a synchronization between rows based on their depths.

This means that when rows are added, deleted or depths are modified in the source table, rows will be added, deleted or have depths modified in the dependent table.

This synchronization can be Automatic, occurring when the changes are saved in the source table, or they can be Manual, requiring the geologist to open a synchronization window to view the differences and choose which updates to make in the dependent tables.

A report which will display any differences between the source and linked tables, whether the configurations are Automatic or Manual, can be accessed by selecting **Linked Table Synchronization** from the **Options menu list**.



From this report users can select which rows they would like synchronized and update the linked tables by hitting the 'Synchronize' button.



Synchronization E	Differences			
Hole Number: VB1	1124			
HOLE_INTERV	/AL			
HOLE_STRUCTUR	RE	(MANUAL)	AII 🗹	
Depth From	Depth To	Action Required	Select	Comments
0	10.0000	EDIT	\checkmark	
10.0000	25.0000	EDIT	\checkmark	
25.0000	37.8000	ADD	\checkmark	
5.0000	10.0000	DELETE	\checkmark	
Page 1 of 1				
Synchronizo				
Synchronize				

Since configurations may vary by business units, the hole's original business unit will define which table linking configuration to use. If a user's active business unit is different than the original business unit for the selected hole, the following message will be displayed informing them that table linking data updates could occur.





If a table is configured as a linked or dependent table that will be automatically synchronized, then additions, deletions and edits of depths will be disabled in DHLogger, and Drill Hole Import. Exceptions to this business rule is with the HOLE_ASSAY_SAMPLE table, where only INSERTs are ever synchronized. Deletions and edits of sample depths will always be the user's responsibility to maintain.

REPORTS AND VIEWING DATA

There are several generic reports that are included with the application that allow you to view, save and print Drill Hole data.

The Report Viewer is accessed by selecting Reports from the Options menu list.

Hole Number Hole Type Azimuth Dp Hole Size Start Date End Date Logged By Final Depth Project: 2017-BASIN 58.00 Project: 101 Oct 16, 2018 58.00 Project: NEW 40.00 40.00 40.00	Oct 16, 2018	DRILL H	OLE LIST				Page 1 of 1
Operation Operation Operation S8.00 YP1001 Deamond Drill Oct 16, 2018 Total length Drilled for Project: 2017-BASIN S8.00 YP0ject: NEW Total length Drilled for Project: 2017-BASIN S8.00 YP0ject: NEW 40.00 40.00 YP12 Deamond Drill Oct 12, 2018 0.00 YP12 Deamond Drill Oct 12, 2018 0.00 YP12 Deamond Drill Oct 16, 2018 Total length Drilled for Project: NEW 40.00 YP12 Deamond Drill Oct 16, 2018 Total length Drilled for Project: 98.00 Total length Drilled: 98.00	Hole Number Hole Type	Azimuth Di	p Hole Size	Start Date	End Date	Logged By	Final Depth
MH-1001 Diamond Drill Oct 16, 2018 Total length Drilled for Project: 2017-BASIN S8.00 röject: NEW 40.00 40.00 M1 Diamond Drill Oct 12, 2018 40.00 M2 Diamond Drill Oct 12, 2018 40.00 M3 Diamond Drill Oct 12, 2018 0.00 X Diamond Drill Oct 12, 2018 0.00 X3 Diamond Drill Oct 16, 2018 0.00 X4 Diamond Drill Oct 16, 2018 0.00 X3 Diamond Drill Oct 16, 2018 0.00 X4 Diamond Drill Oct 16, 2018 0.00 X5 Diamond Drill Oct 16, 2018 0.00 X4 Diamond Drill Oct 16, 2018 0.00 X5 Diamond Drill Oct 16, 2018 0.00 X4 Oct 16, 2018 0.00 0.00 X5 Oct 16, 2018 0.00 0.00 X4 Oct 16, 2018 0.00 0.00 X4 Oc	Project: 2017-BASIN						
Total length Drilled for Project: 2017-BASIM 58.00 Project: NEW 40.00 DM1 Damond Drill 0ct 12, 2018 40.00 DM3 Diamond Drill 0ct 12, 2018 0.00 X Diamond Drill 0ct 12, 2018 0.00 X Diamond Drill 0ct 12, 2018 0.00 X Diamond Drill 0.00 0.00 X Total length Drilled for Project: NEW 40.00 X Total length Drilled: 98.00	DH1-001 Diamond Drill			Oct 16, 2018			58.00
Project: NEW DM1 Diemond Dril 40.00 M2 Diemond Dril 0 Oct 12, 2018 40.00 M3 Diemond Dril 0 Oct 12, 2018 0.00 M4 Ott 10, 2018 0.00 0.00 M5 Ott 10, 2018 0.00 0.00 M6 Ott 10, 2018 0.00 0.00 M6 Ott 10, 2018 0.00 0.00 M6 <td></td> <td></td> <td></td> <td></td> <td>Total</td> <td>ength Drilled for Project: 2017-BA</td> <td>SIN 58.00</td>					Total	ength Drilled for Project: 2017-BA	SIN 58.00
M1 Damond Drill Oct 12, 2018 40.00 M2 Diamond Drill Oct 12, 2018 0.00 M3 Diamond Drill Oct 12, 2018 0.00 X4 Diamond Drill Oct 12, 2018 0.00 X5 Diamond Drill Oct 12, 2018 0.00 X6 Diamond Drill Oct 16, 2018 0.00 X7 Diamond Drill 0.01 0.01 X8 Diamond Drill 0.02 Total length Drilled for Project: NEW 40.00 X8 Diamond Drill 0.01 Diamond Drill 0.02 Total length Drilled: 98.00	Project: NEW						
M2 Diamond Drill Oct 12, 2018 0.00 M3 Diamond Drill Oct 12, 2018 0.00 X Diamond Drill 0.01 0.016, 2018 0.00 Total length Drilled for Project: NEW 40.00 Total length Drilled for Project: NEW 40.00	Diamond Drill			Oct 12, 2018			40.00
M3 Diamond Drill Oct 12, 2018 0.00 OK Diamond Drill Oct 16, 2018 Total length Drilled for Project: NEW 40.00 Total length Drilled for Project: NEW 98.00	DM2 Diamond Drill			Oct 12, 2018			0.00
x Damond Drill 0.00 Total length Drilled for Project: NEW 40.00 Total length Drilled: 98.00	Diamond Drill	_		Oct 12, 2018			0.00
Total length Drilled for Project: NEW 40.00 Total length Drilled : 98.00	X Diamond Drill			Oct 16, 2018	22,8725		0.00
Total length Drilled: 98.00					Total	ength Drilled for Project: NEW	40.00

From this window, you can select one of several generic reports from the picklist to report on the data in your database. Some reports are hole-specific and will require the input of a single hole number.



Additionally, there is the ability to select multiple holes to print or save as PDF (using the "Batch" toolbar buttons). From these windows, you also have the choice of selecting a standard report from a picklist, or to navigate and select a Crystal Report, of which we include a standard report.

11	Project Number	Hole Number	Status	Start Date	End Date	Entered by	Azimuth	Dip Common Northing	Common Easting	Common Elevatio
~	2005	PL2_	NEW							
>	2005	PL21	NEW							
>>>	2005	PL22	NEW							
	NEW	DM01	NEW	Mar 02, 2017						
	NEW	DM02	NEW	Mar 02, 2017						
	NEW	DM03	NEW	Mar 02, 2017						
	Drill holes: 6									

Another option to view drill hole data is with a customizable graphic log. This utility is accessible when the Drill Hole Folder is open, from the **Graphic Log** in the **Options menu list**.

	-		ł
3	-	•	

	and a briant		- 192	
Project Na Project Co Start Date Complete	ame: South Basin 2017 ode: 2017-BSN-S s Nov 03, 2017 d Date:	Hole Number: DH Primary Coordinates Grid: Northing: 0.00 Easting: 0.00 Elevation: 0.00	-001 Nov(Collar Dip: 45.00 Collar Az: 300.00 Length: 49.00 Hole Size: AQ Hole Type:DD Scale: 3 Centimeters = 10 Meters	<u>33, 2017</u>
	Major Lithology Rock Code 3.76	Gold GPT Magnetic S	usceptibility 30.00	
Epidote				
Втесска				
Gossan				
Aplite				
silicified				
Gossan				


aphic Log Set Options			
Page Options			
Number of Pages	Page Width	Page Height Show	Tick Every
	8.5	▼ 11.0 ▼ 20	•
Scaling Options			
Calculate By	Scale		
Number of Pages	3 • : Cm	Equals 10 In Equals In	
Set Scale			
Selected Columns		Available Columns	
Report Column	Table Name	B Major Lithology	
Rock Code	Major Lithology	Major Alteration Maior Mineralization	
Gold GPT	Assavs	⊕ Major Structure	
Copper %	Ascalve	Hajor Texture	
copper 2	Assays	H- Minor Litrology	
Magnetic Susceptibility	Magnetic Susceptibility	Minor Mineralization	=
		Minor Structure	
		🗄 Minor Texture	
		Rock Quality	
		Magnetic Susceptibility	
		Magnetic Susceptibility	
		E LAS Data	
1		op cho buta	

This window shows some of the available configuration to create your own customized Graphic Log.

Still another option is to visualize the current hole, or several holes with the **InTouch Widget Viewer**, which is available from the **Options menu list**. This utility opens Report Manager to customize or run widgets created for In Touch.





Widget Select	on		>
○ View currer	t drill hole with InTouc	h visualizer	
Select a Re	oort Manager InTouch	widget	
InTouch Wida	et		
Test1	1		
Test2			
	ОК	Cancel	
		1	

DESURVEY DRILLHOLE

When tables that have been configured to store desurvey data are assigned to the user's logging style, a new menu item called **Desurvey Drillhole** appears in the **Options menu list.** This feature will perform a desurvey of the current hole, providing a coordinate exists and there is direction data, and it will store the output in the configured tables.



LOG: PLANNED DRILLHOLES

The Planned Drillholes module is used to generate drill hole setup information. Access to the Planned Drillholes module is limited by the user's logging style. The DHL_PLANNED_DRILLHOLES table must be granted to the logging style on the Logging Style Administration window in Fusion Administrator.

The Planned Drillholes module can be opened from the **Log > Planned Drillholes** menu.

The hole number field supports letters, numbers, space, and special characters except the following:

- Single quote '
- Double quote "
- Comma,
- Semicolon ;
- Tilde ~
- At @
- Pound #





Planned drill holes can be imported through the Drill Hole Import or manually entered on the Planned Drillholes module.

IMPORTING PLANNED DRILLHOLES

Planned Drillholes can be imported into DHLogger from a CSV or other compatible file using the Drill Hole Import tool. The import process is the same as for importing regular drill holes.

Open the Drill Hole Import module and add a new import profile. Provide an import name then select the Planned Drillholes table on the Import Definition popup.

Table Name	Select All	^
Collar		
Coordinate		
Survey		
MagSus		
Planned Drillholes	~	
Rock Codes		
Major		
Minor		
Texture		
Structure		
Alteration		
Mineralization		
Samples		
Standards		
Composite Samples		
Custom_MINZONE		~



port Name Planned	▼ DHLogg	er		
File Type: Comma delimited with I Mapped columns	Import File: neaders C:\\Users\\Century Syste	ms\\Desktop\\Im 📖		Include:
Import Column	Database Column	User Default	System Default	
HOLE_NUMBER	HOLE_NUMBER			
None	PROJECT_NUMBER	'2005'		
HOLE_TYPE_CODE	HOLE_TYPE_CODE			
None	GRID_TYPE_CODE	'LOCAL:'		
None	planned_depth	'150'		
None	elevation	'100'		
None	eastwest_decimal	'10216.54'		
None	first_sample_depth	'O'		
None	northsouth_decimal	'21695.91'		
None	sample_interval_length	'10'		

After this step, proceed normally as for any other Drill Hole related table. The users can choose a file and then map the columns in the file to the columns in the Planned Drill Holes table and provide System defaults. Once the import completes, the imported holes will appear in the Planned Drillholes window.

Selection Criteria Generated Hole Number Generation Preferences Starting Sample Number © Local © Use 'Hole Number' value ☑ Populate Collar with Azimuth © Automatic: <hole>-001 □ Start Sequence at 000 if Not Security ○ Fusion Remote ○ Prompt to provide a new value ☑ Populate Collar with Dip ○ Use Naming Template ○ Central ○ Specify:</hole>
Generation Details Generated Hole Number Generation Preferences Starting Sample Number ● Local ● Use 'Hole Number' value ○ Populate Collar with Azimuth ● Automatic: <hole>- 001 □ Start Sequence at 000 if Not S ○ Fusion Remote ○ Prompt to provide a new value ○ Populate Collar with Dip ○ Central ○ Use Naming Template ○ Specify: Hole Number Project Status Hole Type Planned Depth Grid Type Northsouth Dec Eastwest Dec Elevation Sample Azimuth Dec Plan1 DM_2017 ○ PLANNED ○ DDH ○ 20.00 UTM-10N ○ 100.00000000 200.00000000 ○ 200.00000000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000 ○ 300.000</hole>
● Use 'Hole Number' value ● Populate Collar with Azimuth ● Automatic: <hole> - 001 □ Start Sequence at 000 if Not S O Fusion Remote ● Prompt to provide a new value ● Populate Collar with Dip ○ Use Naming Template ○ Central ○ Specify:</hole>
O Fusion Remote O Prompt to provide a new value O Dopulate Collar with Dip O Use Naming Template O Central O Specify:
Central O Specify: Hole Number Project Status Hole Type Planned Depth Grid Type Northsouth Dec Eastwest Dec Elevation Sample Azimuth Dec Plan1 DM_2017 PLANNED DDH 20.00 UTM-10N 100.000000000 200.000000000 300.00000000 300.000000000 300.000000000 300.000000000 300.000000000 300.0000000000 300.0000000000000000000000000000000000
Hole Number Project Status Hole Type Planned Depth Grid Type Northsouth Dec Eastwest Dec Elevation Sample Azimuth Dec Plan1 DM_2017 V PLANNED ODH 20.00 UTM-10N 100.000000000 300.000000000 300.000000000 300.000000000 300.000000000 300.000000000 300.000000000 300.000000000 300.0000000000 300.0000000000000000000000000000000000
Plan1 DM_2017 🔽 PLANNED 🗸 DDH 🧹 20.00 UTM-10N 😴 100.000000000 200.000000000 300.000000000 💼 300.00
Plan2 DM_2017 V PLANNED V DDH V 20.00 UTM-10N V 102.00000000 300.00000000 00 .300.00000000 300.00000000
Plan3 DM_2017 v PLANNED v DDH v 20.00 UTM-10N v 104.00000000 200.00000000 300.00000000 D 300.00



SETTING DEFAULTS

If the user has selected the Alteration, Samples, Lithology, Mineralization, Structure or Texture core tables in the Hole Type Generation settings, the default values must be set for some columns in these tables. This is required only if these tables are selected. This must be done because some fields in these tables cannot be empty. If these default values are not entered, but the tables are selected for generation, then the planned drill hole is not generated, and an error message is displayed to the user.



These default values can be entered by clicking on the "Defaults" button in the toolbar on the Planned Drill Holes Window.

Hole Generation Defaults		—
		Close Window
Table Name	Column Name	Default Value
drill_hole_coordinate	coord_type_code	р
hole_alteration	alteration_type_code	
hole_assay_sample	assay_sample_type_code	
hole_interval	rock_type_code	
hole_mineralization	mineralization_type_code	
hole_structure	structure_type_code	
hole_texture	texture_type_code	

Double clicking on a row will open another window that will display available values in a picklist.

🕟 Column Default	×
Table Name	
hole_interval	
Column Name	
rock_type_code	
Default Value	
CAS	\sim
ОК	Cancel



GENERATING PLANNED DRILLHOLES



The planned drill holes can be generated by selecting the planned drill holes in the Planned Drill Holes window and then pressing the "Generate" button in the toolbar.

When a planned drill hole is generated, a new drill hole is created in the Drill_Hole table with a status of "NEW" (if it is generated in the Local database) or "CHECKEDIN" (if generated in the Fusion Remote or Central database). The collar is created automatically for the drill hole. But the user can choose which other tables to populate for that drill hole. The user can also choose whether to have the samples created for the Drill Hole.

When generating drill holes, the user has options for the Generated Hole Number, Generation Preferences, and the Starting Sample Number.

The hole number that is used for the actual drill hole can be either the Hole Number that was designated when the planned drillhole record was created (**Use 'Hole Number' value**) or it can be supplied when the user clicks generate (**Prompt to provide a new value**).

If the user has chosen to be prompted, after clicking the Generate button in the toolbar, a window will appear to provide the new hole numbers. Leaving the "Generated Hole Number" blank will default to the "Planned Hole Number" for those rows, however specifying at least one Generated Hole Number will be required to use this option.

Planned Hole Number	Generated Hole Number
Plan1	
Plan2	
4	m



During the generation of the collar record for the drillhole, options exist for whether the Azimuth and Dip values will be copied into the new drillhole or whether the values will be left empty: **Populate Collar with Azimuth** and **Populate Collar with Dip**.

The starting sample, if samples are going to be generated for the drillhole, can be defined using one of three methods:

Automatic Will use the HoleNumber as a prefix and "-001" as the first sample. However, if the first sample does not begin at depth 0 (ie. it is not sampled), it is possible to create the first 'not sampled' sample number as HoleNumber-000.

Using Naming Template It is possible to define a sample naming template for Planned Drillhole samples. This configuration of a template is performed in Fusion Administrator.

Specify Selecting this option, enables an edit field that allows the user to enter the first sample number. If it ends in a numeric value, then the next sample can be incremented; if it does not, the next sample will have "-001" appended to it.

The tables to be generated for the planned drillhole are defined in the Hole Type Generation reference table in Fusion Administrator.

NOTE: If an interval related table or a table containing depths is configured to be generated with the planned drillhole, the Sample Interval Length column must be specified otherwise those tables will not be generated.



Linked Table Synchronization can impact the data that is generated for a planned drillhole. If one of the tables that is configured under 'Hole Type Generation' in Fusion Administrator is a source table in Table Linking Configuration, then the linked tables that are configured for Automatic synchronization will also have rows inserted during the Planned Drillhole Generation.



LOG: BLAST HOLE

The Blast Hole module is used to log quick, short blast holes. Information logged includes Azimuth, Dip, a coordinate, some custom data, and perhaps one or two samples. Access to the Blast Hole module is limited by the user's logging style. The Blast Hole module must be selected to "Show" in the Logging Style Administration window in Fusion Administrator.

The Blast Hole module can be opened from the Log > Blast Holes menu.

NOTE: DHLogger must be connected to the Local Database to be able to access this module.



Project Numbe	er 2019-B	ASIN	Samp	le Type ASSA	·	<u> </u>	• • (i) ()								
Blast ID	Status	Azimuth Decimal Dip De	cimal Coord	Type Grid Type	NS Dec	EW Dec	Elevation	Blast Date	Blast Length	Sample Number	Depth From	Depth To	Ag Gpt Lab	Au gpt	Cu_Per	Sg Gcm3 Calc
BLAST-01	NEW	300.00	45.00 P	V LOCAL: V	100.000000	200.000000	300.000000 20	019-05-24	10.00	BLAST-01	.00	10.00				•
BLAST-02	NEW	300.00	45.00 P	V LOCAL: V	100.000000	202.000000	300.000000 20	019-05-24	10.00	BLAST-02	.00	10.00				•
BLAST-03	NEW	300.00	45.00 P	V LOCAL: V	100.000000	204.000000	300.000000 20	019-05-24	15.00 💌	BLAST-03	.00	10.00				•
	NEW									BLAST-03-B	10.00	15.00				(1
BLAST-04	NEW	300.00	45.00 P	v LOCAL: v	100.000000	206.000000	300.000000 20	019-05-24	10.00	BLAST-04	.00	10.00				•
BLAST-05	NEW	300.00	45.00 P	V LOCAL: V	100.000000	208.000000	300.000000 20	019-05-24	10.00	BLAST-05	.00	10.00				•
BLAST-06	NEW	300.00	45.00 P	V LOCAL: V	100.000000	210.000000	300.000000 20	019-05-24	10.00	BLAST-06	.00	10.00				•
LAST-07	NEW	300.00	45.00 P	V LOCAL: V	100.000000	212.000000	300.000000 20	019-05-24	10.00	BLAST-07	.00	10.00				•
LAST-08	NEW	300.00	45.00 P	V LOCAL: V	100.000000	214.000000	300.000000 20	019-05-24	3.00							÷.
BLAST-09	NEW	300.00	45.00 P	V LOCAL: V	100.000000	216.000000	300.000000 20	019-05-24	3.00							•
BLAST-10	NEW	300.00	45.00 P	V LOCAL: V	105.000000	200.000000	300.000000 20	019-05-24	10.00	BLAST-10	.00	10.00				•
BLAST-11	NEW	305.00	45.00 P	V LOCAL: V	105.000000	202.000000	300.000000 20	019-05-24	10.00	BLAST-11	.00	10.00				•
BLAST-12	NEW	305.00	45.00 P	v LOCAL: v	105.000000	204.000000	300.000000 20	019-05-24	15.00 💌	BLAST-12	.00	10.00				÷.
	NEW									BLAST-12-B	10.00	15.00				(1
BLAST-13	NEW	305.00	45.00 P	V LOCAL: V	105.000000	206.000000	300.000000 20	019-05-24	10.00	BLAST-13	.00	10.00				•
BLAST-14	NEW	305.00	45.00 P	V LOCAL: V	105.000000	208.000000	300.000000 20	019-05-24	10.00	BLAST-14	.00	10.00				•
BLAST-15	NEW	305.00	45.00 P	V LOCAL: V	105.000000	210.000000	300.000000 20	019-05-24	10.00	BLAST-15	.00	10.00				÷.
BLAST-16	NEW	305.00	45.00 P	V LOCAL: V	105.000000	212.000000	300.000000 20	019-05-24	10.00	BLAST-16	.00	10.00				+
LAST-17	NEW	305.00	48.00 P	V LOCAL: V	105.000000	214.000000	300.000000 20	019-05-24	3.00							•
BLAST-18	NEW	305.00	48.00 P	V LOCAL: V	105.000000	216.000000	300.000000 20	019-05-24	3.00							•
BLAST-19	NEW	305.00	48.00 P	V LOCAL: V	110.000000	200.000000	300.000000 20	019-05-24	10.00	BLAST-19	.00	10.00				(+)(#

While data is entered in one list, it is separated and stored across four tables.



Drill Hole

- •Blast ID: mandatory; this is the hole number
- •Azimuth Decimal: optional
- Dip Decimal: optional

Hole Type: mandatory, not visible or editable, it is defaulted to 'BLAST'

Drill Hole Coordinate

- •Coordinate Type
- •Grid Type
- •Northsouth Decimal
- •Eastwest Decimal
- Elevation

While it is not mandatory to enter a coordinate for the Blast Hole, if any of these fields contain data, they all must contain data

DHL Blast Hole

- •Blast Date: mandatory; defaulted to the current date
- •Blast Length: mandatory

User-customized fields are created in this table, and can be made required if desired

Hole Assay Sample

- •Sample Number
- •Depth From
- •Depth To

While it is not mandatory to enter a sample for the Blast Hole, if any of these fields contain data, they all must contain data

System / Business Unit Preferences can control whether multiple samples are allowed in a Blast Hole, and whether a sample is created automatically when a Blast Hole is created (defaulting the From/To to 0 and the Blast Length)



LOG: STANDALONE TABLES

The Standalone Tables module is available to users for data entry into tables that are not related to Drill Holes or Surface Samples -- these are "Standalone" tables.

The Standalone Tables module can be opened from the Log > Standalone Tables menu.



The Selection Criteria section is used to select the Table or Group and specify filters, if necessary, on the data being retrieved.

Only the tables that are assigned to the users logging style will be available for selection.

DHLogger (Lo	ocal database)												-	o ×
$\mathbf{()}$	Standalone Tables													
Ĩ	New	(C) New From	Delete	Save										Ciose Window
1	Selection Criteria		$\langle \langle \rangle$	Sta	ndard Code	Inve	entory Date	Quantity	Reord	ler ?	Status	Is Master	Checkedout Computer	
Log	Table			CDN-123		~ 2021-01-04		137	5 N	~ NEW		Y		
	Standard Inventory		~	OREAS_123a		~ 2021-01-04		142	0 N	✓ NEW		Y		
Import	Enter criteria.			OREAS_124a		2021-01-04		24	8 Y	~ NEW		Y		
Ъ			~											
Export			~											
Samula Anaburir		~												
Sample Analysis		~	<u>~</u>											
Data Transfer			~											
<u>ę.</u>		×												
Administration														
:=														
Preferences														
Other Options														
outer options	Retrieve all on open	1	~											
			۲											
Changes saved to da	atabase													

Standalone Tables window – Table selected



📧 DHLogger (Loc	al database)									– 🗆 🗙
$\mathbf{()}$	Standalone Tables									
Ĩ	Hew New From	Delete	Land Save							Close Window
♪ Log	Selection Criteria	۲	User Accounts			_				
	Table		Username	First Name	Last Name	Created Date	Status	Is Master	Checkedout Computer	
×	User_Accounts	~	jsmith	John	Smith	2021-06-01	NEW	Y		
Import	Enter criteria.		djones	Davy	Jones	2021-05-01	NEW	¥		
C Export		~								
Normality Sample Analysis			Object Table: U	ser Assignments) 💼 🗐				
	~ _		Project	As	signment		Start Date	End Dat	te Statu	is Is Master
ି		~	DM_2018 V A	Assistant to Dwayne Johnson (geo)	2021-06-16		2021-06-22	NEW	Y
Data Transfer	×		DM_2018 V A	Assistant to Walter White (lab)		2021-06-09		2021-06-15	NEW	Y
ç. Administration			DM_2017 C	ataloging Historical core		2021-06-02		2021-06-08	NEW	Y
i≡ Preferences										
Other Options	Retrieve all on open	~								
		۲	·							

Standalone Tables window – Group selected

Data is entered, edited and deleted in the windows directly, using the New, New From, Delete and Save buttons. The behaviour of the copying of child data (Always, Never, Prompt) can be configured in the User Preferences window.

<u>NOTE</u>: when a parent row is copied the unique column(s) will need to be edited before a save can be completed. Samples will not be copied to the new row as they must be unique in the database.

When a Group has been selected, the top window displays the Parent table, and the bottom window displays the Child tables.

The Object Table picklist displays the child tables assigned in the Group, and only those tables that have been assigned to the user's Logging Style.

There are buttons for navigating tables (also use ALT + P, ALT + N) which may be disabled if only one child table exists, adding data (also use CTRL + SHIFT + N), deleting data (CTRL + SHIFT + D), and multiple row selection with checkboxes.

LOGGING MODULAR SAMPLES

Samples can be logged against parent row if modular_samples table has been assigned to that group. Modular samples can be logged by selecting parent row and "Samples" option from the "Object Table" picklist. The **Sample Number** field supports letters, numbers, space, and special characters except the following:

- Single quote '
- Double quote "
- Comma,
- Semicolon;
- Tilde ~



- At @
- Pound #

You can also choose from a list of **Sample Type** codes that have been assigned to the active logging style. Depths for the samples can be visible or hidden depending upon the configuration set for the Modular Samples table for the group.

This module also allows you to generate samples, log QC Samples, add modular standards, print sample tags, and add samples to a dispatch. These options are available on the toolbar displayed at the bottom of this window.

Channels								
Channel Name	Channel Type	Channel Num	Status	; Is N	laster	Checkedout Computer		
Channel-01	English	1	NEW	Y				
			\sim	\bigcirc			-	_
Object Table: S	amples	\blacksquare			ample Type:	ASSAY	~	
Sar	nple No.	Depth Fro	m	То	Length	Ag_ppm_Lab		Status Code
Sample_Test-001			.00 🚔	.50 🌲	0.5	50 L	ogged	
Sample_Test-002			.50 🜲	1.25 🜲	0.7	75 L	ogged	
Sample_Test-003			1.25 🔹	2.00 📮	0.7	75 L	ogged	
Sample_Test-004			2.00	2.50	0.5	i0 L	ogged	
Sample_Test-005			2.50	3.00	0.5	i0 L	ogged	
Sample_Test-006			3.00	3.50	0.5	i0 L	ogged	
Sample_Test-007			3.50	4.00	0.5	i0 L	ogged	
					_			
		(<u>b</u>)	C					
					$\overline{\mathbf{O}}$			

Standalone Tables window – Modular Samples selected

IMPORT: DRILL HOLE IMPORT

The drill hole import utility is used to import drill hole data from a comma or tab delimited file into DHLogger.

Open the Drill Hole Import by clicking the Import > Drill Hole Import menu.





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To create a new import, use the New button and enter an Import Name in the window that opens.

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To remove an import, use the Delete button while you have the import selected in the dropdown.

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(<i>Å</i>)	
\cdot	

Once an import is defined and columns are mapped, the data can be imported. Using the Run button will execute the currently selected tab of the import.



Once an import is defined and columns are mapped, the data can be imported. Using the Run Selected button will execute each of the tabs in the import, starting with the first, providing they have the "Include" checkbox enabled.

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$\mathbf{\overline{v}}$	
$\overline{}$	

If an import schema needs to be modified, for example to add another table, click the Import Definition button to open the Import Definition window for editing.

	\sim	~	1
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L			L
`		ン	

Data is usually imported into the Local database, which is the default location. However, data can also be imported directly to the Central or Fusion Remote databases. To change the destination, click the Database button.

When creating a New import, or when opening the Definition, you will be prompted to select the tables to include on the import.



Table Name	Select 🗌 All 🌰
Collar	
Coordinate	
Survey	•
MagSus	\checkmark
Planned Drillholes	•
Rock Codes	
Major	•
Minor	•
Texture	
Structure	
Alteration	•
Mineralization	•
Samples	•
Standards	
Composite Samples	•
Custom_MINZONE	

NOTE: The available tables will change depending on the logging style and the destination database.

port Name Import VC		ogger: Local		
ollar	Coordinate Survey	Major	Custom_LITHOLOGY	
File Type Comma delimited with	Import File headers	emo_Input\\Import_Files\\DHCollar.e	Perform Formula Calculations	Include
Import Columns	Database Column	User Default	System Default	
BHID	HOLE_NUMBER			
ENDDATE	completed_date			
None	entered_by	'geol1'		
Final_Depth	final_depth			
None	original_creator	'admin'		
Project_Number	PROJECT_NUMBER		'NEW'	
UofD_code	UOFD_CODE		'DECIMAL'	
UofM_code	uofm_code		'METRIC'	

Import module window with completed mappings







Default column mappings will be added based on the selected tab. Required columns will appear in blue and must have a mapping or default defined. Additional column mappings can be added by clicking the New button.



Column mappings can be edited by selecting a mapping and clicking the Edit button or by double clicking on the row in the Mapped columns section.

Data import mapping - Demo Import_Collar			l	X
Import data Column None	Maps to	Fusion Database Column Default Value	Predefined default	
OK Cancel 🖉 Cor	ntinuous	Add		



Import Data

•Column: A list of columns from the source import file

Fusion Database

•Column: A list of available columns for the selected table.

•**Predefined default:** The value that will be entered in this column if an empty value is encountered in the import file. This is a system default and can't be changed. It will be overridden if a Default Value is specified.

•**Default Value:** The value that will be entered in this column if an empty value is encountered in the import file.



Once columns have been mapped, the file can be imported. Start the import by clicking the Run currently selected import button.



If you wish to import multiple files at once, click the Run Selected imports for this session button. This will import all tabs that have the Include checkbox checked for the currently selected import.

During the import, DHLogger will scan the file and identify any validation issues or problems with the file and import definitions in a Pre-scan report. Any problems listed within the report must be corrected before the import can be performed.



Data Import - Prescan report
Import Pre-Scan report
Date/Time: May 24, 2016 03:56 pm
Import Name: DEMO IMPORT_COLLAR
Table Name: drill_hole
The following project number(s) do not exist:
BAD
NO ROWS WERE IMPORTED
OK Cancel Print Save As

A Data Transfer Results window will appear once the import task is completed. It contains a general summary of the import procedure.

Data Transfer Results
Processed: 2 Transferred: 2 Inserted: 2 Updated: 0 Deleted: 0 Errors: 0
ОК

The configuration of Table Linking could have an impact on the data that is permitted to be imported. Only source tables or non-linked tables are available for import. If the source table is HOLE_INTERVAL, only Major interval data will be sent to the destination tables. During import, the original business unit for each hole will be used to check whether the table is configured as a linked table set to be automatically synchronized; if it is, the import is halted for that table, with a message like the following:



Data Import - Prescan report	
Import Pre-Scan report	^
Date/Time: Oct 01, 2018 01:53 pm Import Name: AATEST_CUSTOM_MINZONE	
Table Name: UDEF_MINZONE	
Automatic table linking synchronization is configured for this table.	
Data cannot be imported for the following holes: KBTEST2	
NO ROWS WERE IMPORTED	*
OK Cancel Print Save As	

IMPORT: BLAST HOLE IMPORT

The blast hole import utility is used to import blast hole data from a comma or tab delimited file into DHLogger.

Open the Blast Hole Import by clicking the **Import > Blast Hole Import** menu.





To create a new import, use the New button and enter an Import Name in the window that opens.

(iii)

To remove an import, use the Delete button while you have the import selected in the dropdown.





Once an import is defined and columns are mapped, the data can be imported. Using the Run button will execute the import.

Data is usually imported into the Local database, which is the default location. However, data can also be imported directly to the Central or Fusion Remote databases. To change the destination, click the Database button.

ust Hole						
File Type Tab delimited with hea	Import File ders C:\\Users\\Datamine\	\Desktop\\install\\Blast2018.txt	Perform Formula Calculations			
Mapped columns						
Import Column	Database Column	User Default	System Default			
HOLE	HOLE_NUMBER					
DATE	BLAST_DATE					
LENGTH	BLAST_LENGTH					
None	hole_type_code		'BLAST'			
ТҮРЕ	ASSAY_SAMPLE_TYPE_CODE		'ASSAY'			
AZ	azimuth_decimal					
COORD	COORD_TYPE_CODE		'P'			
FROM	depth_from					
то	depth_to					
DIP	dip_decimal					
EW	eastwest_decimal					
EL	elevation					
GRID	GRID_TYPE_CODE		'UK:'			
NS	northsouth_decimal					
PROJECT	PROJECT_NUMBER		'NEW'			
SAMPLE	SAMPLE_NUMBER					

Blast Hole Import module window with completed mappings







Default column mappings will be added based on the selected tab. Required columns will appear in blue and must have a mapping or default defined. Additional column mappings can be added by clicking the New button.



Column mappings can be edited by selecting a mapping and clicking the Edit button or by double clicking on the row in the Mapped columns section.

🕑 Da	ta import mapping - Blast_Import_Blast Ho	le			×
	Import data Column HOLE	Maps to	Fusion Database Column HOLE_NUMBER V User Default Value	System Default	
1	OK Cancel Co	ntinuous	Add		



Import Data

•Column: A list of columns from the source import file

Fusion Database

•Column: A list of available columns for the selected table.

•**Predefined default:** The value that will be entered in this column if an empty value is encountered in the import file. This is a system default and can't be changed. It will be overridden if a Default Value is specified.

•**Default Value:** The value that will be entered in this column if an empty value is encountered in the import file.

During the import, DHLogger will scan the file and identify any validation issues or problems with the file and import definitions in a Pre-scan report. Any problems listed within the report must be corrected before the import can be performed.

Data Import - Prescan report
Import Pre-Scan report
Date/Time: Feb 01, 2021 11:34 am Import Name: BLAST_IMPORT_BLAST HOLE Table Name: DRILL_HOLE
The following project_number(s) do not exist: DM-2018 NO ROWS WERE IMPORTED
OK Cancel Print Save As

A Data Transfer Results window will appear once the import task is completed. It contains a general summary of the import procedure.



IMPORT: LAB ASSAYS IMPORT

The lab import utility is used to import laboratory results in a comma or tab delimited format into DHLogger.

Using this module will require pre-configuration in Fusion Administration:

- Laboratories
- Lab Packages
- Lab Package Details
- Standards, Standard Validation Rules
- Custom Lab Import Templates, if not using the Fusion Standard format.

There are also several System Preferences which apply to the Lab Import, controlling various actions:

- Preview Sample Type
- Detailed Email Body
- Check Dispatch
- Update Sample Dispatch Copies
- Warn / Stop Import if Analysis Date > Import Date

Open the Lab Import by clicking the Import > Lab Assays Import menu.





Begin Bernett Map Symbols Import Settings Folder Fusion Standard C:\TestFolder Template Type Import Activity .CSV (Comm Import Activity .CSV (Comm Results_20Dec14.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec22.csv Results_20Dec22.csv Results_20Dec22.csv	Resson r R Ia Separated Values) C Imp	Image: Second File Image: Second File DLD Image: Second File Image: Second File Image: Second File Image: Second File	Ignore lab standards Detailed import log	Validate standard d ✓ Prompt to view imp ✓ C 2	Close Wind
Arethod Folder Fusion Standard C:\TestFolder Type C:\TestFolder Type C:SV (Comm Import Activity Available Files for Import: Results_20Dec15.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec15.csv Results_20Dec19.csv Results_20Dec19.csv Results_20Dec19.csv Results_20Dec19.csv Results_20Dec20.csv Results_20Dec20.csv Results_20Dec20.csv	r R ha Separated Values) C	C C C C C C C C C C C C C C C C C C C	Ignore lab standards Detailed import log	Validate standard d ✓ Prompt to view imp ✓ C 2	efinitions port summary
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rogress: mport Log:		5 Au 6 DH1-001-001 7 DH1-001-002 9 DH1-001-003 9 DH1-001-004 10 DH1-001-005	AuR 3.4 3.2 3.15 3.3 3.4		Cu 3.3 3.2 3.1 3.3 3.4



Import Settings

- Method: Fusion Standard / User Defined. Indicates the format of the file that will be followed.
- •**Template:** picklist of custom lab import templates, enabled only when **Method** is User Defined. After a template is selected, an arrow will appear to allow for a preview of the template definition.
- •Folder: Use the browse button (ellipsis) to open the folder that is holding the import file(s). The location that was chosen last will be the starting point when the browse button is clicked.
- •Type: CSV / TXT. Only files of the selected type will be available for import.
- •**Renamed File:** specifies an extension to rename the successfully imported files. Set to the same as the selected type if you don't want to rename the file.
- •Ignore lab standards: when enabled, lab standards will not be imported
- Validate standard definitions: when enabled, each standard type that is in the import file will be checked for a definition default result for each lab package detail
- **Detailed import log:** when enabled, a detailed summary of the file import will be displayed in the Import Log pane, uncheck to only display the list of holes that were imported to
- •**Prompt to view import summary:** when enabled, following an import that has had standards imported, a prompt will appear to view the summary, and will then open the Batch Authorization window.

Import Activity

• Available Files for Import

- •displays a list of files matching the **Type** selected, that exist in the **Folder** that was chosen
- select one or more files to import
- Progress: displays the progress (which file is being imported)
- •Import Log: displays the operations that were performed during the Lab Import, including prompts and responses
- •**Print, Copy, Save As:** buttons to allow users to print the import log, copy it to the clipboard, or save the log as a TXT file.
- •Import File: displays the contents of the selected import file (first selected)



FUSION STANDARD IMPORT FORMAT

Each record in the Lab Import file must be in this format when using the Fusion Standard import method.

 VBLAB

 2005-VG

 KBT1A1,DISP1

 3/14/2007

 Au_gpt_FA,Cu_Per_ICPMS

 DH1-001-001,A,0.05,0.0502

 DH1-001-002,A,0.051,0.052

 DH1-001-003,A,0.24,0.98

 DH1-001-004,A,1.11,1.08

 DH1-001-005,A,1.06,1.13

 ST-123,ST,1.13,1.03

 BL-123,ST,<0.1,<0.1</td>



Line 1

•Laboratory Name: The laboratory name is required in the import file and must exist in the DHLogger database. Refer to the Laboratory Administration reference table to add new labs.

Line 2

•Lab Package: The lab package is required in the import file and must exist in the DHLogger database. Refer to the Laboratory Administration reference table to add new packages.

Line 3

•Lab Reference Number: A unique reference number. This is required in the import file.

• Dispatch Number: A unique dispatch number from the dispatch report sent to the lab.

Line 4

•Analysis Date: The date analysis was performed in the YYYY-MM-DD format. This is required in the import file.

Line 5

•Element Headers: A list of the elements in the import file. Each entry must be seperated by a delimiter character (comma for *.CSV or tab for *.TXT). Element headers are required in the import file.

Line 6+

•Sample Data: The first column must be the sample number, the second column mustbe the sample type (if the package uses sample type mapping), and then the following columns represent the data corresponding to the list of elements. Each entry must be separated by a delimiter character (comma for *.CSV or tab for *.TXT). At least one row of sample result data is required in the import file.

DEFINE SYMBOLS

The lab import file may contain symbols that specify any special operations that should be performed on the result data. For example, it can be specified that any time a Less than (<) symbol is encountered in an import file, the associated entry should be divided by 2.



Click the Define Actions for Unknown Symbols (Symbols) button to define behavior when a symbol is encountered in the import file.



 <th>Symbol</th><th>Action</th><th>Value</th><th>Reason</th>	Symbol	Action	Value	Reason
* 1.000 AD ISA SUB ISA ISA SUB IC SNR SUB SNR	<	1	2.000	BD
SA SUB ISA LC SUB LC SNR SUB SNR	>	*	1.000	AD
LC SUB LC SNR SUB SNR	ISA	SUB		ISA
SNR SUB SNR	LC	SUB		LC
	SNR	SUB		SNR

Click the New button to add a new Symbol Definition.

	n <u>ann a</u> 10,
	(max. 5 chars)
Action:	
	•
Action Number:	
Reason:	
Reason:	



Search Symbol

•The symbol that will trigger the Action specified

Action

•The action that is to be performed when the Symbol is encountered in an import file. The available choices are:

•Mathematical Operators (+, -, /, *): Perform addition, subtraction, division or multiplication.

•Substitute: Replaces the entry with the value found in the Action Number field.

•Change Status: Changes the status of the record to whatever is specified in the Status Code field. The Action Number field will turn into the Status Code box when Change Status is selected as an action.

Action Number

•The numerator used when the search symbol is encountered.

Reason

•The reason that the operation is performed. The reason picklist is maintained from the Options > Action Reason menu on the Lab Import window.

NOTE: The ability to Add, Edit or Delete from the Symbol Definitions can be restricted by a System Preference (or Business Unit Preference). Applying the restriction will prevent users from performing edits in Fusion Remote and Local databases, however it does not impact the Central or a Standalone database.

IMPORTING SAMPLE RESULTS

Select the import method that matches the import file you wish to import. If using the User Defined method, select the matching template.

Browse to the folder containing your import folder. Change the type if required. A list of files will appear in the Available Files for Import section. Selecting a file will display a preview in the Import File section.



Click the Run button to import the selected file(s)

The import file will be validated and the user may be prompted to continue the import in cases where data is missing.



Once the import has completed, an email notification may be sent (depending on Email Configuration), and you may be prompted to view the import summary if the Prompt to view import summary checkbox is checked.

Nethod Folder Ignore lab standard Validate standard definitions Fusion Standard CNPBApps/PB125/DHLogger/CURRENT_RELEASE/DHL_DHLOGGER Import bodie Prompt to view import summary Template Type Renamed File Detailed import log Prompt to view import summary Import Activity Import Activity Import STLosy Import STLosy Import STLosy Labimp_DMMS.esv Stabim 2.5 Stabim 2.5 Import STLosy Import STLosy Labimp_DMMS.esv Stabim2.5 Stabim2.5 Import STLosy Labimp_DMMS.esv Stabim2.5 Import STLosy Import STLosy Labimp_DMMS.esv Import Stabim2.5 Import Stabim2.5 Import Stabim2.5 Labimp_SMMS.esv	Ignore lab standards Validate standard definitions S\DHLogger\CURRENT_RELEASE\DHL_DHLOGGER Image: Comparison of the standard definitions Renamed File Detailed import log Prompt to view import summary eparated Values) Image: Comparison of the standard definitions Image: Comparison of the standard definitions
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IM-08-005 not round IM-08-006 not found	
INI-US-UU6 NOT TOUND	
Import Cancelled	
Import canceled	

System Preferences

Several options exist which control various aspects of the Lab Import process:

 Preview Sample Type: when enabled, a window will be displayed that shows the sample type (and standard code) of each sample being imported



- Check Dispatch: with this enabled, validations of the Dispatch Number will occur in Lab Import
 - If the dispatch from the file is not found in the database, a prompt will be issued to continue with the import without performing dispatch checks and updates
 - If the dispatch from the file is in the database with a status = NEW, a prompt will be issued to continue with the import without performing dispatch checks and updates
 - If the dispatch from the file is in the database with a status other than NEW or DISPATCHED (eg. SENT), a prompt will be issued to continue with the import without performing checks and updates <u>unless</u> the setting to update sample dispatch copies is enabled, then no prompt will be issued
 - Dispatch checks Missing / Extra samples: Are all samples in the dispatch in the import file? Are all samples in the import file in the dispatch?
- Update Sample Dispatch Copies: if enabled, sample dispatch information will be updated in 'copies' of the sample dispatch records when importing into a database other than the Central, and records will be flagged to update the Central when Fusion Client is next started against the Central database



Standard Validation Rules

The samples imported with Lab Import are assigned a pass/fail status based on the performance of all defined standard results within the file.

Batch Rules: All elements of a standard are validated against the defined limits, and if any value falls outside of the acceptable limits, all samples within the batch are considered failed. This is the behavior without any extra rule configuration.

Run Rules: A custom import file (and template) can be used that has a grouping of samples into smaller sub-sets, called "runs". It is possible to create a validation rule for a standard / element that says when a standard/element passes or fails, only pass or fail the samples that have the same value in the "run" column as the standard.

Plus/Minus Rules: Another type of validation rule can be created that will only pass or fail a certain number of surrounding samples, eg. "+/-2" would mean 2 samples above the standard and 2 samples below the standard (relative position as found in the import file)

Std Dev Grade Range Rules: Another type of validation rule can be created that will only pass or fail samples with results that fall in the same standard deviation as the standard result. You can also specify a Run Number to limit the validation of samples to those in the same run as the standard's run.

An import file can contain a variety of standards that have a mixture of these validation rules. As a result, there is an order to the application of the rules: Batch, Run, Std Dev Grade Range, then Plus/Minus.

IMPORT: SCINT DATA IMPORT

The scint data import utility is used to import LAS Scint data from a comma or tab delimited file into DHLogger -- DHL_LAS_SCINT_HEADER and DHL_LAS_SCINT_DATA tables.

Open the Scint Data Import by clicking the Import > Scint Data Import menu.

Note: This import is only available when the user's active logging style has been granted access to the LAS module.





nport Scint Data					_		×	<
New Delete Drill Hole Selection	Save	File Conte	ents				Close Wir	ndow
Project DM_2017 (Datamine 2017) Scint Import Template: Scint Scint Scint Scint Scint Scint Data - Header	Hole Number DM_2017-Demo-0004 View Template CSV View Template	1 0 2 2 3 5 4 0, 5 0, 6 0, 7 0, 8 0, 9 0, 10 0, ¢ Scint Data	C 1 yhn Smith D17-11-23 TT-95328 1 2 3 4 5 6 7 8	C 2 DM_2017-Demo-000- 0.21 0.22 0.23 0.23 0.24 0.25 0.25	C 3	C 4	C 5	^
Scintillometer ID		Dep	th	Gamma Cps				
SCT-95328			0.10000	0.210000				
Operator			0.20000	0.220000				
			0.30000	0.230000				
11/23/2017			0.40000	0.230000				
			0.50000	0.240000				
			0.60000	0.250000				
			0.70000	0.250000				
			0.80000	0.250000				
			0.90000	0.260000				
			1.00000	0.260000				
			1.10000	0.260000				
			1.20000	0.270000				



Drill Hole Selection

• **Project** and **Hole Number**: picklists for selecting the drill hole to which the data being imported belongs

Scint Import

- •**Template**: picklist of templates that are configured in Fusion Administrator to define the mappings from a file to the Header and Data table columns
- •File Type: from the template definition indicating what type of file will be imported (TXT or CSV)
- •View Template button: to display the chosen template's configuration in a popup window
- •File Name: the name of the file chosen to be imported (use ... button to browse to files)
- •Import button: begins the import of data to the DHL_LAS_SCINT_DATA_HEADER and DHL_LAS_SCINT_DATA tables
- •**Preview File** button: will display the contents of the import file in the "File Contents" window

Scint Data - Header

• Displays the custom columns in the DHL_LAS_SCINT_DATA_HEADER table, and will show the imported data when the import completes

Scint Data

• Displays the 2 standard columns (DEPTH, GAMMA CPS) and any custom columns from the DHL_LAS_SCINT_DATA table, and will show the imported data when the import completes

In addition to importing data to the DHL_LAS_SCINT_DATA_HEADER and DHL_LAS_SCINT_DATA tables, from this window you can also manually enter, modify or delete rows as necessary.



New button that will allow for the manual addition of a row into the Scint Data window.



Delete button allows for the deletion of rows from the Scint Data window



Save button to save the additions, modifications, or deletions of rows from the Scint Data window.



IMPORT: TABLE MAPPING

Table Mapping Name	Auto Run	Selected Only	Source Datasource	Source Database File	Source Table/File	Source File Type	Source Username	Source Password	Destination Da
SImport_2005North_Surfac	e 5 🗆		FILE	C:\Users\Heather\Documents\S	Su C:\Users\Heather\Docum	ТАВН			Local
'G Drillhole Import_Assay			FILE	C:\Database\Demo Input\VG_A	ssC:\Database\Demo Inpuť	CSVH			Local
Column Mappings				Tura Mullable Kau Tura II	er Default Value	Destinatio	n System Default		

This utility, opened from the **Import > Table Mapping** menu, is used to bring data into the database, or export data out of the database in a very straightforward way – mapping tables and columns. Using the table mapping utility should not be used to bring in data that needs to be validated (with many links to reference tables, etc.), in that case Drill Hole Import or Sample Station Import should be used, or Lab Import for analytical results that need to be validated against standards.



Table Mapping	Name	Table Mapping	Group
Source		Destination	
D <mark>atasource</mark>		Datasource	
		 ✓ 	V
File Type		File Type	
		~	~
Username	Password	Username	Password
Username Table Name	Password	Username	Password
Username Table Name	Password	Username Table Name	Password
Table Name Details	Password	Table Name	Password
Table Name Details Comments	Password	Username Table Name	Password
Table Name Details Comments Auto Run	Password	Username Table Name	Password

To define a new table mapping, click the New menu item and populate the window above.



Table Mapping Details

- •Table Mapping Name: the unique name for the mapping
- •Table Mapping Group: optional, a grouping for the mapping

Source

- •Datasource: picklist, populated with ODBC Datasources that are already defined, plus FILE
- •File Type: DSN if a datasource is selected, or Tab delimited / Comma delimited if FILE is chosen as datasource
- •Username, Password: may be required if a database has been selected
- Database File: if MS Access File is selected as datasource, must pick the MDB file
- Table Name: if a database (MDB or otherwise) is selected, pick the table
- •File Name: if FILE is selected, pick the file

Destination

- **Datasource:** picklist, populated with ODBC Datasources that are already defined, plus FILE
- •File Type: DSN if a datasource is selected, or Tab delimited / Comma delimited if FILE is chosen as datasource
- •Username, Password: may be required if a database has been selected
- •Database File: if MS Access File is selected as datasource, must pick the MDB file
- Table Name: if a database (MDB or otherwise) is selected, pick the table
- •File Name: if FILE is selected, pick the file

Details

- •Comments:information about the table mapping
- •Auto Run: checkbox to indicate this mapping should be executed when the "Auto Run" menu item is selected
- •SQL Filter: a filter can be applied to the mapping to the mapping, useful when data is transfer involves a database table


Source	Destination
File:	Table:
C:\Users\Heather\Documents\SurfaceSamp	sstn_surface_samples
Column	Column
None	
Datatype	Datatype
I	Кеу Туре
	System Default User Default

Once the mapping is defined, column mappings can be added.

Source

- •File / Table: not editable, depending on the source type (file or dsn) will display the source filename or table name
- •Column: from a picklist, supply the source column name
- •Datatype: not editable, displays the selected column's datatype/size

Destination

- •File / Table: not editable, depending on the destination type (file or dsn) will display the destination filename or table name
- •Column: from a picklist, supply the destination column name
- •Datatype: not editable, displays the selected column's datatype/size
- •Key Type: None / Primary. Whether the column is the primary key or not
- •System Default: not editable, displays the selected column's database default if it exists
- •User Default: supply a default to be used when the column's value is null



When all column mappings have been created, simply click the Move Data menu item to execute the table mapping.



EXPORTS

DHLogger can export data to MapInfo, Datamine, CSV and Text formats using pre-defined standard exports or custom exports designed using Report Manager and the Custom Export Designer available in Fusion Administrator. DHLogger can display up to 20 custom exports.

Exports can be accessed by selecting the desired export from the **Export** menu.



Below are the standard exports available in DHLogger:

- CSV Export
- Datamine Export
- MapInfo Export

SV Export (Active Business Unit :	: ALL)								
Begin Find) (Sort Fil	ter	Export by Date					Close Window
Selection Criteria									6
Destination Folder									
C:\Exports\CSV								Retrieve Details	
Source Database	Export	Grid		Module			Down	hole Survey Data	
LOCAL	~ UTM:		~	Drill Holes		\sim	Ехро	rt by Test Type	~
Selected Drill Holes		Drill Holes Available	for Selec	tion					
Hole Number		Project Number	Hole N	lumber	Start Date	End	Date	Logged By	Original Creator
	- i								
	5								
	//								
		Drill boles: 0							
		<							:
	8								
Drill holes: 0									
		,							



SAMPLE ANALYSIS: SAMPLE TAG GENERATOR

The Sample Tag Generator utility is used to automate the creation of printable sample tags. You can print tags for existing samples, or you can specify a Sample Number and quantity, and the Sample Tag Generator will create tags for those samples. Entering some Selection Criteria can help to reduce the number of Holes or Dispatches that will be retrieved.

The Sample Tag Generator is available from the **Sample Analysis > Sample Tag Generator** menu item.



Begin Print	Previous Tag Next) Tag						Close Wine
election Criteria	Generation Type		Generation Details		I	Label Details		
C	Select Holes ar	nd/or Samples	Database: Local			Copies:	2	
ter criteria.	O Samples by Dis	spatch				Template:	DEFAULT	
ILL_HOLE.Hole ID	O Specify Sample	25	Force rotate printed	tags				
one of VDH1-002			Print copies in samp	le ord	ler			
	Proto et Number	U.J. Northan	6	~	Committee Manual and	C	Hala Nambar	
DH1-001 DH1-002	Project Number	Hole Number	Statu	5	Sample Number	Sample Type	Hole Number	
	2017-BASIN	DH1-001	NEW	1	DH1-001-001	ASSAY	DH1-001	
~	2017-BASIN	DH1-002	CHECK		DH1-001-002	ASSAY	DH1-001	
~				~				
~	Drill holes: 2							
~	8 💉 🖳 🖽				Samples: 2			
	<		>		<			
~	Sample Number	Hole Number	Samp ^	\gg	Drillhole Tags (2) Surface	Sample Tags		
	DH1-001-003	DH1-001	ASSAY	>				
	DH1-001-004	DH1-001	ASSAY	<	0 - :	2.00	2021-01-25	
	DH1-001-005	DH1-001	ASSAY	\ll	DH1 DH1-001-001			
trieve all on open \checkmark	Samples: 6						ASSAY	



A DEFAULT template is included with DHLogger and custom sample tag templates can be generated using the Sample Tag Designer utility in Fusion Administrator. The font, colour, text size, included columns and even custom images can be defined on custom sample tags.

GENERATING SAMPLE TAGS FOR EXISTING SAMPLES

SELECT HOLES AND/OR SAMPLES

Select this option under the Generation Type heading to select the samples by Drill Hole.

Select a Drill Hole, then either add the hole or individual samples to the top right list. These are the samples that will be used to generate tags.

SAMPLES BY DISPATCH

Select this option under the Generation Type heading to select the samples by Dispatch.

Select a Dispatch, then either add the dispatch or individual samples to the top right list. These are the samples that will be used to generate tags.

Since a Dispatch can contain samples of multiple types (DHLogger, Sample Station, Modular) there is the ability to specify a template for each type of tag.

GENERATING SAMPLE TAGS FOR SAMPLES THAT DO NOT EXIST

SPECIFY SAMPLES

Select this option under the Generation Type heading to create tags for samples that do not exist in the database.

Enter the Starting Sample Number and Quantity to Generate under the Generation Details heading. The starting sample number will be incremented for each consecutive sample tag generated.

GENERATION DETAILS

Two options exist for controlling the generation and printing of samples:

- Force rotate printed tags: to rotate the tags 90-degrees when they print
- Print copies in sample order: determines whether copies of tags are printed as the samples are numbered, or as sets of sample tags (eg. S1, S1, S2, S2, S3, S3, S3, S1, S2, S3)

LABEL DETAILS

Pick a Template if you wish to generate tags other than DEFAULT and specify the number of Copies under the *LABEL DETAILS* heading.





Click the Begin button to generate the tags.



Use the Navigation buttons on the toolbar to move through the generated tags.



Click the Print button to send the generated tags to the printer.

SAMPLE ANALYSIS: SAMPLE DISPATCH

The Sample Dispatch module is used to group samples and assemble the instructions that will be sent to the laboratory for sample analysis.

Open the Sample Dispatch module by clicking on the **Sample Analysis > Sample Dispatch** menu item.



DISPATCH LIST

The list of sample dispatch records has the advanced filter bar added to it to allow you to filter the list by columns in the DHL_SAMPLE_DISPATCH_HEADER and DHL_SAMPLE_DISPATCH_SAMPLES tables. You can also save the filter, and have the list filtered when the window is reopened.

From this window you can add a new dispatch with the New button, or use the New From button to create a dispatch from an existing one – you will be prompted to confirm whether or not to automatically add the same samples to the new dispatch.



Selection Criteria							
~		✓✓			×	Retrieve all on open	
Database CENTR	XAL	~					
Dispatch Number	Company	Dispatched By	Dispatch Date	Project Number	Project Area	Status	
Customized_Dispatch	Datamine Software	admin admin	2018-06-22	DM_2017		DISPATCHED	
DISP1	Datamine Software	admin admin	2018-07-04	DM_2017		DISPATCHED	
DISP2	Datamine Software	admin admin	2018-07-04	DM_2017		DISPATCHED	
Disp3	Datamine Software	admin admin	2018-09-14	DM_2018		DISPATCHED	
DISP9	Datamine Software	admin admin	2018-07-04	DM_2017		DISPATCHED	
Standard Dispatch	Datamine Software	admin admin	2018-06-22	DM_2017		DISPATCHED	

COMPANY DETAILS

Each sample dispatch record stores the company information, including a contact. To prevent the user from having to enter these details every time, which could result in data entry errors or missing data, the fields are automatically populated from defaults that are configured in each database.



To configure the Company Details, click on the Preferences menu item when the Sample Dispatch list window is opened.

Company Details		X
Name		Address
Vultures Bluff Mining Ltd		P.O. Box 321
Country		Postal
UK		903843
Telephone		Fax
984504		340947
Region		Contact Email
Europe		info@datamine.com
	ОК	Cancel

CREATING A NEW DISPATCH

The sample dispatch record is comprised of two sections: the header and the samples. It serves as a request that is sent with the samples to instruct the laboratory on what to analyze.



				Close Wind
ader Samples				
Dispatch				\odot
lumber	Status	Dispatch Date	Dispatched By	Date Entered
ispatch_1	NEW	2021-01-28 14:20:00	John Smith	2021-01-28 14:20:00
ent By	Received By	Ship From	Waybill	Work Order
ohn Smith				
Company Details				\odot
ompany	Country	Region	Telephone	Email
ultures Bluff Mining Ltd	UK		~	
Dispatch Details				\odot
			Council a Deirorita	No. Containers
roject	Laboratory	Lab Package	Sample Priority	
roject 2017-BASIN	ALS CHEMEX	P31a; AA24; MS61		>
roject 1017-BASIN Vulps	Laboratory ALS CHEMEX Coarse Reject	P31a; AA24; MS61 Chemical Lab		×
roject 1017-BASIN Vulps RETURN90	Laboratory ALS CHEMEX Coarse Reject ASKCLIENT	Chemical Lab ALS CHEMEX	v	v
roject 1017-8ASIN WIps ETURN90	Laboratory ALS CHEMEX Coarse Reject ASKCLIENT	P31a; AA24; MS61 Chemical Lab ALS CHEMEX		

The Header information for a Sample Dispatch record

The Sample Dispatch Header is customizable, both in column structure, and layout. The layout configuration is performed with the same window as the Collar Layout configuration. This window is accessible using a right-click of the mouse, which displays a pop-up menu allowing you to 'Toggle Edit Mode'.



Dispatch

- •Number: a unique name for the dispatch. If a template is used, it may be updated based on information entered in the Dispatch Details (eg. Project)
- •Status: not editable, identifies the current status of the record (NEW, DISPATCHED, SENT)
- **Dispatched By:** the username of the person dispatching the samples. It defaults to the current user's FirstName + LastName, but can be edited.
- **Dispatch Date:** the date the samples were sent out. It can be entered directly or picked from a calendar popup when the field is double-clicked.
- •Date Entered: the date the information was entered.
- •Sent By: the name of the person that is shipping the dispatch
- •Received By: the name of the user/lab expecting the dispatch
- •Ship From: the pickup location for the sample dispatch
- Waybill: the shipping or tracking number for the dispatch
- •Work Order: the work order to which this dispatch is charged
- **Carrier:** from a picklist, the name of the company that will transport the samples from the site to the lab.

Company Details

- Pre-populated with the defaults from the Company Details window, configured from the Preferences menu; can be edited on the screen
- Company name, address and contact information

Dispatch Details

- •**Project Area:** this is the location in the project where the samples are located, from a picklist linked to 'Hole Locations'
- •**Project:** this the project where the samples are located, from a picklist linked to 'Projects' (note: there is no actual validation to ensure samples in dispatch are from holes/samples belonging to this project)
- Laboratory: the laboratory that is performing the analysis, from a picklist
- •Lab Package: the lab package that will be used, defining the analysis to be performed, from a picklist
- •Sample Priority: the priority given to this request for analysis, from a picklist
- •No. Containers: the total number of containers being shipped to the lab as part of this dipsatch.
- •**Pulps:** the instructions to the lab for what is to be done with the undersized material, or pulp, from a picklist
- •Coarse Reject: the instructions to the lab for what is to be done with the oversized material, from a picklist
- •**Preparation Lab:** if different, the name of the lab that is performing the preparation of the samples, from a picklist
- •Comments:general comments about the dispatch
- •Special Instructions: additional instructions to the lab regarding the handling or analysis of the samples



Three system options can be enabled that have an impact on the Sample Dispatch:

- Use Filters to Restrict Lab Package Selection: enabling this setting adds two fields (Analysis Type, Hole/Medium) to the Sample Dispatch Header section in a dispatch that will filter the list of lab packages. This also requires additional configuration in the Lab Package.
- Use Lab Package to Filter Available Samples: this setting will filter the list of available samples to holes that have the same Hole Type or surface samples that have the same Medium Code as what is associated with the selected lab package.
- Use Lab Package to Validate Selected Samples: this setting will validate the dispatch's selected samples allowing only samples that belong to holes that have the same Hole Type or surface samples that have the same Medium Code as what is associated with the selected lab package.

election Criteria		Selected Samples				Available Samples - Dri	ill Hole	
Aodule	C	Sample Number	Sample Type	Hole Number] [Sample Number	Sample Type	Hole Number
Drill Hole Samples	~	DH1-001-001	ASSAY	DH1-001		DH1-001-001	ASSAY	DH1-001
nter criteria.		DH1-001-002	ASSAY	DH1-001		DH1-001-002	ASSAY	DH1-001
RILL HOLE.Hole ID	~	DH1-001-003	ASSAY	DH1-001		DH1-001-003	ASSAY	DH1-001
equal to VDH1-001		DH1-001-004	ASSAY	DH1-001		DH1-001-004	ASSAY	DH1-001
	~				~	DH1-001-005	ASSAY	DH1-001
~					1	DH1-001-006	ASSAY	DH1-001
						DH1-001-007	ASSAY	DH1-001
~					>			
	~				\gg			
~								
Detrieve all an anan	Ť							
Retrieve all on open								
	~							

The Sample information for a Sample Dispatch record



Selection Criteria

- •A means of filtering the available samples list
- Module: Channel / Drill Hole / Surface / Standards / Composite / Modular. The type of samples to display in the Available Samples window
- •Criteria: specify up to 4 columns for filtering
- •Save the filter, set 'retrieve on open' options, retrieve the filtered data

Selected Samples

- •Drag/drop samples from the Available list to the Selected list
- •Retrieves and displays the samples that have been saved to the Dispatch

Available Samples

• Displays the available samples for the chosen module which meet the defined criteria

A System or Business Unit Preference exists which can limit the number of samples that can be added to a dispatch. Along with a number limit, administrators can set the action that will occur when the limit has been reached (Warn or Restrict).

? The limit Wou	total number of s t. Id you like to conti	amples for this dispatch has	way?
Details >		Yes	No
"Sample: SS03 "Sample: SS04 "Sample: SS05 "Sample: SS06 "Sample: SS07 "Sample: SS08 "Sample: SS09 "Sample: SS10 "Sample: SS14			

An example of the warning message that is received when the Dispatch Limit has been reached



The following Samples will not be	added to the dispatch
	_
Details > OK	
'Sample: NEW5-002	
*Sample: NEW5-003	

An example of the restriction message that is received when the Dispatch Limit has been reached



To customize the Available Samples window, click the Customize Columns button to add or remove columns from the window. The editor window will not open if the "Include QA/QC with Available Samples" option is checked (see Options menu when Samples tab has focus).

Column Name
Ag_gpt_Lab
Au_gpt_Lab
Cu_Per_Lab
Parent_Sample_Number
Sg_gcm3_Calc



The samples that have been selected for dispatch can be grouped further. Click the Group Samples button to open the Sample Grouping window.



Sample Grouping								
Groups			Dispatch Samples					
Group	Preparation	-	Sample Number	Sample Type	Hole Number	Project Number		
■ Prepara	ition		DH1-001-009	ASSAY	DH1-001	2005		
Ball_	Mill h_Split (3)		DH1-001-010	ASSAY	DH1-001	2005		
D	DH1-001-001		DH1-001-011	ASSAY	DH1-001	2005		
	0H1-001-002 0H1-001-017		DH1-001-012	ASSAY	DH1-001	2005		
□ Dry_	Weight (4)		DH1-001-013	ASSAY	DH1-001	2005		
	0H1-001-006 0H1-001-007		DH1-001-014	ASSAY	DH1-001	2005		
D	0H1-001-008		DH1-001-015	ASSAY	DH1-001	2005		
lim D ⊟ Rod	0H1-001-016 Mill (2)		DH1-001-016	FldBlk	DH1-001	2005		
D	0H1-001-014		DH1-001-017	Dup	DH1-001	2005		
i D	0H1-001-018		DH1-001-018	FldBlk	DH1-001	2005		
			Samples: 18					
		•		Ē				
			ОК	Cancel				

- The groups are configured in Fusion Administrator and can be defined as either a picklist of known reference data (eg. Preparation), or as an edit field, where the Group Values will be added at the time of dispatch (eg. Seal Number).
- Warnings are implemented to alert the user if there are samples in the dispatch that are not assigned to a group.
- Samples can be assigned to multiple group values, but not under the same group (eg. to a Preparation and a Seal Number is allowed, but not to 2 preparations or 2 Seal Numbers)

Additional settings for the Samples window are available by clicking the Sample Options toolbar item.

Enable /	Advanced Filtering
Manually	Sort Selected Samples
Include (QA/QC with Available Samples
Display S	elected Sample Fractions
Display A	vailable Sample Fractions
Send San	ple Fractions with Global



Advanced Filtering: with this enabled, little arrows appear in each of the column labels in the Available Samples window to allow for the specification of a filter on the column

	Sample Number		Sample Type 🖕	Hole Number 🖕	Project Number -	Dispatched 🗸	Modified
Sort	A to Z		ASSAY	DM_TEST0517-1	2005	Y	5/17/2016
Clear	Z to A Filter From "Sample Number"		ASSAY	DM_TEST0517-1	2005	Y	5/17/2016
Text	Filters	F	Equals		2005	Y	5/17/2016
	elect All)	_	Does Not Equ	ial	2005	Y	5/17/2016
	M_TEST0517-1-001 M_TEST0517-1-002 M_TEST0517-1-003	^	Begins With Ends With	2	2005	N	5/17/2016
	M_TEST0517-1-004		Contains		2005	N	5/17/2016
	M_TEST0517-1-006		Does Not Cor	ntain	2005	N	5/17/2016
	M_TEST0517-1-007 M_TEST0517-1-008 M_TEST0517-1-009		Custom Filter		2005	N	5/17/2016
	M_TEST0517-1-010		ASSAY	DM_TEST0517-1	2005	N	5/17/2016
	B2675-02 B2675-03	J	ASSAY	DM_TEST0517-1	2005	N	5/17/2016

Manually Sort Samples: with this enabled, the samples in the Selected Samples window can be dragged and dropped to create the list in any order desired; when disabled, the list is sorted alphabetically on Sample Number.

Sample Number	Sample Type	Hole Number
DM_TEST0517-1-001	ASSAY	DM_TEST0517-1
DM_TEST0517-1-010	ASSAY	DM_TEST0517-1
DM_TEST0517-1-002	ASSAY	DM_TEST0517-1
DM_TEST0517-1-009	ASSAY	DM_TEST0517-1
DM_TEST0517-1-003	ASSAY	DM_TEST0517-1
DM_TEST0517-1-008	ASSAY	DM_TEST0517-1
DM_TEST0517-1-004	ASSAY	DM_TEST0517-1
DM_TEST0517-1-007	ASSAY	DM_TEST0517-1
DM_TEST0517-1-005	ASSAY	DM_TEST0517-1
DM_TEST0517-1-006	ASSAY	DM_TEST0517-1

Include QA/QC with Available Samples: when enabled, standards will be visible in the Available Samples list along with the samples for the chosen module (eg. Drill Hole).



Display Selected Sample Fractions: option to show sample fractions in the Selected Samples window.

Display Available Sample Fractions: option to show sample fractions in the Available Samples window.

Send Sample Fractions with Global: when enabled, if a sample that has size or density fractions is dragged to the Selected Samples list, the sub-samples will also be added to the Selected Samples list (although they won't be visible unless the 'display' option is enabled).



Clicking the Window Display toolbar item will change the orientation of the Selected and Available Samples windows, from side-by-side to top-bottom, and vice versa.

Sample Number	Sample Type	Hole Number	Project N	umber	Number of Bags	Comments	
DM_TEST0517-1-001	ASSAY	DM_TEST0517-	1 2005	1			
DM_TEST0517-1-010	ASSAY	DM_TEST0517-	1 2005	1			
DM_TEST0517-1-002	ASSAY	DM_TEST0517-	1 2005	1			
Samples: 10 vailable Samples - Dri	ll Hole		* ^ Y	∕ ≫			
Samples: 10 railable Samples - Dri Sample Number	II Hole	Hole Number	Project Number	Dispatched 🗸	Modified 🗸		
Samples: 10 railable Samples - Dri Sample Number DM_TEST0517-1-001	II Hole Sample Type	Hole Number June DM_TEST0517-1	Project Number 2005	Dispatched 🗸	Modified v 5/17/2016		
Samples: 10 ailable Samples - Dri Sample Number DM_TEST0517-1-001 DM_TEST0517-1-002	II Hole Sample Type ASSAY ASSAY	Hole Number J DM_TEST0517-1 DM_TEST0517-1	Project Number 2005	Dispatched v Y Y	Modified 5/17/2016 7		

DISPATCHING A SAMPLE DISPATCH

When all information is entered in the header, and the samples are selected and organized, the record is ready to be dispatched. At any point, the record can be closed and saved for further editing; however, when it is complete, click the "Dispatch" button to finalize the record. The status will be changed to "DISPATCHED" and all the fields will be disabled (locked for editing).

- A Sample Dispatch can be reopened for editing by a user with the QUALIFIED PERSON profile, where the status will be reset to "NEW"
- A Sample Dispatch will receive a status of "SENT" when a record in with "DISPATCHED" status is transferred from the Local to Fusion Remote or Central, or from Fusion Remote to Central. The 'copy' that remains in the source database has its status set to "SENT".



Immediately following the Dispatch action, Crystal Reports Viewer will open the Sample Dispatch Report for this record. At any time, you can also select a dispatch from the list and use the Report menu item to open the Dispatch Report.



Crystal Reports Viewer - LOCAL database	>
File Help	
1 😴 🗂 📾	
	SAP CRYSTAL REPORTS®
Main Report	
	i
Sam.	May 24, 2016
Dispatch Nur	mber: Dispatch_DM2
Company: Vultures Bluff Mining Ltd	Laboratory: VBLAB
Address: P.O. Box 321	Project: NEW
Fax: 340947	Work Order: 7603
E-mail: info@centurysystems.net	Area: Vultures Bluff
	Waybill Number: 1256
Sample For Unit of Measure Analytical Method	Sample For Unit of Measure Analytical Method
Sg gcm3 Calc	
Number of Samples: 4	Dispatched On:
Pulps: Store for 3 months and return	No. Containers: 1
Senior Project Geologist:	From: VB
Comments: These are from the Comments	2011000000
Special Instructions: These are from the Special Instruct	tions
Sample Numbers DM TEST0517-1-001 - DM TEST0517-1-004	
Current Page No.: 1 Total Page No.: 1	Zoom Factor: 85%

LOCK DISPATCHED SAMPLES

"Lock Samples in Data Tables once they are dispatched", a system preference available in Fusion Administrator, offers a way to disable the editing (depths, sample number) or deletion of samples that belong to a Sent Dispatch. Once enabled, a new workflow for the Sample Dispatch module will be established:

- all Dispatch records can be added, edited, and dispatched from the Local Database only
- the only samples that will be available for selection are those that are the 'master' version (ie. holes are CheckedOut or New)
- validation will occur before dispatching to confirm that the samples added to the dispatch still
 match the type of sample in the database (in case S1, S2, S3 were added to a dispatch and then
 renamed as a standard 'S2' was added; S2 is no longer a sample and a validation message should
 warn the user of the change)



The Dispatch action cannot be taken	
Please remove and re-select the problematic samples before attempting to Dispatch.	
Details > OK	
The following samples have problems that prevent the Dispatch action: • DMT6-004 can not be found as a Drill Hole Sample • DMT6-008 can not be found as a Standard • DMT6-008 can not be found as a Composite Sample • DMT6-009 can not be found as a Drill Hole Sample	
] .

When the Sample Dispatch module is opened against other database environments (Central, Fusion Remote):

- the NEW button is not available
- on a dispatch with 'DISPATCHED' status, the 'Reopen' button will remain disabled to users with QUALIFIED PERSON profile

SAMPLE ANALYSIS: BATCH AUTHORIZATION

The Batch Authorization utility is a QA-QC analysis tool that allows users to review lab import information and control charts.

The Batch Authorization window is accessed from the **Sample Analysis > Batch Authorization** menu item.





Sample Batch Authorization												
Email (Print											Close Window
Selection Criteria												$\overline{\mathbf{v}}$
Database: Local											E Fetch H	listorical Data
Lab Reference Number	Batch Status	Import Log	Standar	d Result	s Dupli	cate Results	All Imported Results					
VA18052651	Passed	Standard	Element	U			Standard Co	ntrol Chart			Summ	nary ^
VA18094295	Passed		A	000			BLANK-1_AA26	Au ppm AA26		St	andard Code	BLANK-1_AA26
		2 TO_OREAS_AA20	Au	ppin						El	ement	Au
		210_OREAS_AA26	WtRecvd	kg						U	nit of Measure	ppm
		217 OREAS AA26	Au	ppm	0.1	-				Ar	nalytical Technique	AA26
										M	lin	-0.010000
		217_OREAS_AA26	WtRecvd	kg						Ex	pected (Actual value) 0.010000
		228_OREAS_AA26	i Au	ppm						м	ax	0.100000
			W#Rooud	ka	alue					St	andard Deviation DB	J III
		228_OREA3_AA20	WIRECVU	ĸġ	P .						ount of Samples	124
		BLANK-1_AA26	Au	ppm	dan d	•		-			ount of Standard	3
		BLANK-1 AA26	WtRecvd	kg	Stal					BL	ANK-1_AA26 %	2.42%
										м	inimum Actual	-0.010000
										M	aximum Actual	-0.010000
										A	verage Actual	-0.010000
					-0.1 DM 2017-De	mo-0003-00018	DM 2017-Den	+ no-0003-00058	DM 2017-D		as	0
					0.1_0017-00		Sample	Number	0.1_0017.01	N	umber of Failures	0
										Fa	ilure %	
		<		>		Result	— Actual —	Minimum —	Maximum	/%	within 1 SD	
			_	- 1							within 2 SD	
		Sample Nu	imber		Hole	Number	Reference Numb	er Date Analyzed I	Date Shipped	Date Imported	Laboratory	Lab Package
		DM_2017-Demo-	0003-00098	DM_2017	7-Demo-00	03	VA18052651	2018-03-21 00:00	2018	-03-28 11:01:19	ALS CHEMEX	P31a; AA26; MS61
		DM_2017-Demo-	0003-00058	DM_2017	7-Demo-00	03	VA18052651	2018-03-21 00:00	2018	-03-28 11:00:03	ALS CHEMEX	P31a; AA26; MS61
		<						_				~
	>											

The Batch Authorization module is comprised of three components: Selection Criteria, Batch List, and Batch Summary tabs.

Selection Criteria: Advanced Filter Bar, which allows for the specification of up to 4 columns to aid in the retrieval of a reduced set of data. The filter can be saved, along with the Retrieve options. The criteria will filter the rows in the Batch List.

Batch List: is a list of the most current lab reference numbers along with their batch status, which meets the specified selection criteria. It also shows the Dispatch Number associated with the batch.

Batch Summary tabs: for the selected lab reference number, you can view several tabs of information: Import Log, Standard Results, Duplicate Results, and All Imported Results

There is also a **Fetch Historical Data** checkbox that will impact the results that are included in the Batch Summary. When enabled, it will retrieve all samples/standards associated with the Batch Number; when disabled, it will only retrieve the samples/standards associated with the last import of the Batch.



abase: Local										E Fetch Histo	rical Data
b Reference Number	Batch Status	Import Log	Standard Results	Duplicate Results	All Imported Res	ults					
8052651	Passed	Hole Number	Sample M	iumber	Depth From	Depth To	Length	Sample Type	AU_PPM_AA26	WTRECVD_KG_WEI21	Sample St
8094295	Passed	DM_2017-Demo-00 DM	_2017-Demo-0003-00001		8.40	9.00	0.60	ASSAY	-0.010000	1.380000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00002		9.00	10.00	1.00	ASSAY	0.010000	2.400000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00003		11.40	12.00	0.60	ASSAY	-0.010000	1.540000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00004		12.00	13.50	1.50	ASSAY	-0.010000	3.760000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00005		13.50	15.00	1.50	ASSAY	-0.010000	2.720000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00006		15.00	16.50	1.50	ASSAY	-0.010000	3.080000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00007		16.50	18.00	1.50	ASSAY	0.020000	3.640000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00008					STANDARD	0.350000	0.080000	Complete
		DM_2017-Demo-00 DM	_2017-Demo-0003-00009		18.00	19.00	1.00	ASSAY	-0.010000	2.480000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00010		19.00	20.50	1.50	ASSAY	-0.010000	3.120000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00011		20.50	22.00	1.50	ASSAY	-0.010000	3.660000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00012		22.00	23.10	1.10	ASSAY	0.020000	2.520000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00013		24.00	25.15	1.15	ASSAY	0.170000	2.520000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00014		27.00	27.80	0.80	ASSAY	0.050000	1.620000	Passed
		DM_2017-Demo-00 DM	_2017-Demo-0003-00015		28.95	30.00	1.05	ASSAY	-0.010000	2.480000	Passed
		DM 2017-Demo-00 DM	2017-Demo-0003-00016		30.00	31.05	1.05	ASSAY	0.010000	1.740000	Passed

Users that have been assigned the QUALIFIED PERSON profile will see a toolbar on the All Imported Results tab.



Select a batch with a status of 'Passed' and, without selecting any samples on the 'All Imported Results' tab, click the **Authorize** toolbar button to change the status of the batch to 'Authorized'.



The status can be changed at both the batch and sample level. When no samples are selected, using the **Change Status** toolbar button will allow a user to change the status of the entire batch. When individual samples are selected, the sample status can be changed.



To assist with the selection of samples, you can use the **Select Status** toolbar button to highlight the samples that have a particular status.



Samples can be selected for reanalysis by either adding samples to a new or existing sample dispatch. Select the samples and then use the **Add to Dispatch** toolbar button.



Samples can be selected, and users can add comments and/or assign custom actions using the **Edit** toolbar button. This information is stored in the DHL_SAMPLE_COLUMN_DETAILS table. Custom actions are added in the Object Audit Code table in Fusion Administrator.



To associate a file (eg. Laboratory Exceptions Report) with a Batch use the **Attach File** toolbar button.



SAMPLE ANALYSIS: BULK SAMPLE GENERATOR

The ability to create multiple new samples based off a selected set of samples in the database. This generator is accessed from the **Sample Analysis > Bulk Sample Generator** menu.



The Bulk Sample Generation window displays the list of samples in the database belonging to holes that are Checked Out (or MIXED, with Samples table Checked Out).

After selecting the samples you want to create duplicates of, specify a **Starting Sample Number** and choose a **Sample Type**, then click the Begin button to generate the new samples.

ulk sample generation				_	_	×
Begin Print Selection Criteria	Find	Sort Filter				Close Window (
Starting Sample Number DM_2017-Demo-0004-D0	Sample Type	Database				
Sample Number	Depth From	Depth To Hole Number	Sample Type	Project Number	Include	
DM_2017-Demo-0004-00120	155.00	156.50 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00121	156.50	158.00 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00122	158.00	158.90 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00123	158.90	160.00 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00124	160.00	161.50 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00125	161.50	163.00 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00127	163.00	164.50 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00128	164.50	166.00 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00129	166.00	167.50 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00130	167.50	169.00 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00131	169.00	170.50 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00132	170.50	172.00 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00133	172.00	173.50 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00134	173.50	174.40 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00135	175.30	176.00 DM_2017-Demo-0004	ASSAY	DM_2017		
DM_2017-Demo-0004-00137	176.00	177.00 DM_2017-Demo-0004	ASSAY	DM_2017		



A preview window appears to confirm the samples that will be created once the Generate button is clicked.

Generate) ϵ	Page	→ Next Page	Close Window
New Sample Number	Sample Type	From	To Hole Number Parent Sample Number	
DM_2017-Demo-0004-D0	DUP	158.00	158.90 DM_2017-Demo-DM_2017-Demo-0004-00122	
DM_2017-Demo-0004-D1	DUP	160.00	161.50 DM_2017-Demo-DM_2017-Demo-0004-00124	
DM_2017-Demo-0004-D2	DUP	163.00	164.50 DM_2017-Demo-DM_2017-Demo-0004-00127	
DM_2017-Demo-0004-D3	DUP	167.50	169.00 DM_2017-Demo-DM_2017-Demo-0004-00130	
DM_2017-Demo-0004-D4	DUP	172.00	173.50 DM_2017-Demo-DM_2017-Demo-0004-00133	
DM_2017-Demo-0004-D5	DUP	176.00	177.00 DM_2017-Demo-DM_2017-Demo-0004-00137	
Number of Samples: 6				

DATA TRANSFER

SYNCHRONIZATION SETTINGS

Open the Synchronization Settings configuration window by clicking

the Data Transfer > Synchronization Settings menu.

- Data Transfer
- Synchronization Settings
- Refresh Lists
- Transfer In
- Transfer Out
- Photo Upload
- Photo Download
- Standalone Transfer In
- Standalone Transfer Out
- External Transfer In
- External Transfer Out
- View Logs
- View Current Transfers



Synchronization Settings	
Default Datasource CEN	NTRAL ~
Refresh Lists and Stru	cture
🗹 Transfer Planned Drill	lholes
🗹 Transfer Sample Dispa	atch
Synchronize Objects o	on Transfer In
Synchronize Now	r
ОК	Cancel

Default Datasource: choose the DSN to be used as the source for the synchronization listed below. It will also be used as the DSN (along with Local) for **Quick Transfer** actions.

The ability to control which actions occur during Synchronization is available with checkboxes for the following items:

- Refresh Lists and Structure
- Transfer Planned Drillholes
- Transfer Sample Dispatch

There is also the ability to control, with the **Synchronize Objects on Transfer In** and **Synchronize on Startup** checkboxes, whether the sync will happen during the Transfer In process and/or when DHLogger is started.

Additionally, there is a **Synchronize Now** button that can be used to immediately execute the actions that are checked (enabled).

REFRESH LISTS

To ensure that all lists are current, a manual Refresh Lists of all lists (not just those that have been identified as changed) can be initiated by clicking the **Data Transfer > Refresh Lists** menu.





Regin Sava Diret	View Log		
Source Database CENTRAL Generate a Differences Report Prior to Refresh	Lists: 🗹		
List Name	Records	Errors	
Ref Clast Size	8	0	
Ref Clast Shape	5	0	
Ref Clast Sorting	4	0	
Ref Site Disturbance	7	0	
Ref Precipitates	8	0	
Ref Min Code	29	0	
Las Equipment Category	0	0	
Las Equipment Calibration	0	0	
Las Equip Calibration Files	0	0	
Las Header Rig	0	0	
User Defined Table Objects	8	0	
Business Unit Table Objects	8	0	
Business Unit Column Positions	33	0	
List Version	313	0	

Source Database: choose the datasource from which to refresh lists

Generate a Differences Report: an option to query the databases to determine which tables have differences.

TRANSFER IN, TRANSFER OUT

Open the Transfer In and Transfer Out windows by clicking the appropriate items under the **Data Transfer** menu.





estination Database:	CENTRAL		✓ Transfer Acti	ion: Check In	~		
rill Holes for transfer			Drill Holes in Local D	Database:			
Hole Number	Transfer In Status	~	Project Number	Hole Number		Status	Start Date
M_2017-Demo-0005	5	<	DM_2017	DM_2017-Demo-0004		MIXED	Feb 19, 2018
		>	DM_2017	DM_2017-Demo-0005		MIXED	Feb 22, 2018
		Ś	DM_2017	DM_2017-Demo-0006		MIXED	Feb 25, 2018
		//	DM_2018	B18-01		CHECKEDOUT	Feb 02, 2021
			Drill holes: 4	ALL			
			<				

Transfer In window

The **Transfer In** window allows you to select the **Destination Database**. The picklist varies depending on the current database that you are logged into: Local – list shows Central and FusionRemote if it exists; FusionRemote – list shows only Central

There is also a picklist for the **Transfer Action** which gives the options of Check In or Copy In.

The **Transfer Out** window allows you to select the **Source Database**. The picklist varies depending on the current database that you are logged into: Local – list shows Central and FusionRemote, if it exists; FusionRemote – list shows only Central.

There is also a picklist for the **Transfer Action** which gives the option of Check Out or Copy Out.

If Selective Transfer is enabled there is an additional toolbar item that allows for the selection of tables to transfer.



PHOTO UPLOAD, PHOTO DOWNLOAD

The management of Core Photos is aided by the Photo Upload and Photo Download windows. This allows users to transfer the actual photo images that are associated with drill holes from a storage location that is defined in one database to the storage location that is defined in another database. This photo transfer will enable the storage of all core photos in a centralized location, from which other users can download photos to their local machines (or to a remote server), or from which they can choose to view the images when in DHLogger.

The transfer of photos can be performed following the transfer of drill holes, where the user is prompted to move the photos (or it can occur automatically, if the preference to prompt is disabled). Optionally, users can upload / download the photos without a transfer of any drill holes.

Open the Photo Upload and Photo Download windows by clicking the appropriate item under the **Data Transfer** menu.



Jpload Core Photos to the Repository						
		$\overline{\mathbf{T}}$				×
Begin Print Hi	nd Sort	Filter				Close Wi
Selection Criteria						
Destination Database: CENTRAL	~					
hotos selected for Upload:		Photos in Local Data	base:			
Photo Name	Drill Hole Statu	Project Number	Hole Number	Core Photo Name	Depth From	Depth To
DM_2017-Demo-0006_F0.00_T5.00-01.jpg	CHECKEDOUT	DM_2017	DM_2017-Demo-0006	DM_2017-Demo-0006_F0.00_T5.00-01.jpg	o	5.00
DM_2017-Demo-0006_F5.00_T10.00-01.png	CHECKEDOUT	DM_2017	DM_2017-Demo-0006	DM_2017-Demo-0006_F5.00_T10.00-01.png	5.00	10.00
DM_2017-Demo-0006_F10.00_T15.00-01.png	CHECKEDOUT	DM_2017	DM_2017-Demo-0006	DM_2017-Demo-0006_F10.00_T15.00-01.png	10.00	15.00
0M_2017-Demo-0006_F15.00_T20.00-01.png	CHECKEDOUT	DM_2017	DM_2017-Demo-0006	DM_2017-Demo-0006_F15.00_T20.00-01.png	15.00	20.00
		DM_2017	DM_2017-Demo-0006	DM_2017-Demo-0006_F20.00_T25.00-01.png	20.00	25.00
		DM_2017	DM_2017-Demo-0006	DM_2017-Demo-0006_F25.00_T30.00-01.png	25.00	30.00
		DM_2017	DM_2017-Demo-0006	DM_2017-Demo-0006_F30.00_T35.00-01.png	30.00	35.00
		DM_2017	DM_2017-Demo-0006	DM_2017-Demo-0006_F35.00_T40.00-01.png	35.00	40.00
Photos: 4		2				



STANDALONE TRANSFER IN, STANDALONE TRANSFER OUT

Open the Standalone Transfer In and Standalone Transfer Out windows by clicking the appropriate items under the **Data Transfer** menu.

े	Data Transfer 🗸 🗸 🗸
	Synchronization Settings
	Refresh Lists
	Transfer In
	Transfer Out
	Photo Upload
	Photo Download
	Standalone Transfer In
	Standalone Transfer Out
	External Transfer In
	External Transfer Out
	View Logs

View Current Transfers

Transfer Standalone o	data into Central Database					
A Begin	Print	Find	(Â2) Sort	Filter		Clese Window
Selection Criteri	a Standalone Tab	ble:	USER_ACCOUNT	~		\bigcirc
~			×	v		Retrieve all on open ~ Image: Constraint of the second s
Destination Databa	se: CENTRAL	``	Transfer Action:	Check In 🗸		
Standalone rows se	lected for Check In:	s	andalone records in Local Da	abase:		
User Name C	heck In Status		User Name	First Name	Last Name	Date Created
		< ^j	mith	John	Smith	2021-06-01
		>	jones	Davy	Jones	2021-05-01
		\gg				
Standalone: 0						
<		>				

Standalone Transfer In window



The **Standalone Transfer In** window requires you to select the **Standalone Table** from which you will be selecting individual records to transfer. If the chosen table is a Parent table, then all associated records in each of its Child tables will also be transferred.

There is a **Destination Database** picklist with contents that vary depending on the current database that you are logged into: Local – list shows Central and FusionRemote if it exists; FusionRemote – list shows only Central.

There is also a picklist for the **Transfer Action** which gives the options of Check In or Copy In.

The **Standalone Transfer Out** window requires the selection of a **Table** from which individual records can be selected.

This window allows you to select the **Source Database**. The picklist varies depending on the current database that you are logged into: Local – list shows Central and FusionRemote, if it exists; FusionRemote – list shows only Central.

There is also a picklist for the Transfer Action which gives the option of Check Out or Copy Out.

EXTERNAL TRANSFER IN, EXTERNAL TRANSFER OUT

External Transfer In and Out windows allow you to transfer data to and from external applications. The current formatting is compatible with the Datamine QuickLogger application.

Data in DHLogger can be transferred to QuickLogger with the help of the "External Transfer Out" window and it can be imported back to DHLogger with the help of the "External Transfer In" window.

Open the **External Transfer In** and **External Transfer Out** windows by clicking the appropriate items under the **Data Transfer** menu. These windows are accessible against the Local and FusionRemote databases.



- Photo Download
- Standalone Transfer In
- Standalone Transfer Out
- External Transfer In
- External Transfer Out
- View Logs
- View Current Transfers



Transfer Objects out of Loo	al Database													
Module Name: D	ill Hole		<u> </u>) 🖪) 😫									X
Selection Criteria													(
Selection cinterna														
project_number	~]		⊻	$\overline{\mathbf{v}}$	<u>`</u>						Retrieve all	on open	6	Ě
											_ (Ţ)	٢	(
Options													(
Database	LOCAL			~	Destination	File		~	Folder	C:\ProgramDat	a\Datamine\GDN	AS		.)
Description					Allowed Devices	0 selected - un	limited							
Burden and Harle					Dill Leader Chile									
Business Unit	Exploration_G	eology	1	~	DHL Logging Style	Geologist		~	SSTN Logging Style	Stream_Sedim	ents		~	4
Objects selected for Chee	k Out:		Available objects in Lo	cal Databa	ise:	Common Gr	id: UTM-10N							
Module Name Object		«	Project Number	Hole !	Number	Status	Start Date	End Da	te Entered by		Azimuth		Dip (Com
		<	DM_2018	L-01		NEW	Mar 31, 2023							
		>												
		\gg												
		=												
			Drill bolas: 1	ALL										
				~										
Objects: 0	_													

External Transfer Out window – Drill Holes

ransfer Objects out of L Module Name: Standalone Table:	ocal Database Standalone Channels		<u> </u>) 🚯 斜							>
Selection Criteria channel_name	v.	Ĩ	✓✓	<u></u>	×	×		v	Retrie	eve all on open	(
Options Database Description Business Unit	LOCAL Exploration	n_Geology	· · · · · · · · · · · · · · · · · · ·	Destinatio Allowed D DHL Logg	on File Devices () selected - Ing Style Geologist	unlimited	、 () () () () () () () () () () () () ()	Folder SSTN Logging Style	CAProgramData\Datamine	e\GDMS	(
bjects selected for Ch Aodule Name Objec	eck Out: ct	« < >	Available objects in Loc Channel Name Channel-01	al Database: Channel Type English	Common Channel Num 1 NE	Grid: UTM-10N Status W	Is Master Y	Checkedout Co	admin	Current O	wner
		≫ II III	Standalone: 1								
bjects: 0	_										

External Transfer Out window - Standalone Tables

External Transfer Out window allows you to select the type of data you want to transfer out of Fusion. The records that are transferred receive a status of "External" in the database and become non-editable in Fusion.



Module Name picklist provides the option to transfer data from either Drill Hole or Standalone module.

If the Standalone module is selected, you then choose a **Standalone Table**, from which you can select the individual rows to export (related table records will also be transferred). NOTE: the list is limited to Standalone Tables that have had a key added for them in Fusion Administration.

Database picklist allows for the selection of the source of the data for export.

Destination picklist allows you to select *File*, where you then choose the **Folder** that determines where the exported structure/data will be saved as a JSON-formatted file.

Alternatively, the destination can be *Database*. The exported data will be stored in the External_Transfer table where it will then be visible in the QuickLogger app as a workfile with the provided **Description** which is available to be imported.

Allowed Devices displays a count of the number of the devices that have been selected to have permission to access this JSON file through QuickLogger import. If no specific devices are chosen, then the file is unrestricted and the file can be imported on any device. Device selection is performed by hitting the arrow (>) button, and choosing from the licensed device list.

External Device Selection		×
Check/Uncheck the device na unrestricted)	ames that are permitted to access this exported f	ïle (select none to leave
Device Name	Device User	Select 🗌 All
JohnJ_Phone	John Jones	
Admin_Phone	admin	
,	OK Cancel	

Business Unit, DHL Logging Style, SSTN Logging Style picklists determine the structure (and data) that will be exported from the database.

If no objects are selected and the Begin button is clicked, an export file is still created, however it will only contain the database structure and reference lists that are accessible by the chosen Business Unit and Logging Styles.



Transfer External Objects into Local Database									
(A) Begin									Close Window
Options									\bigcirc
Destination DB LOCAL	Import Source	File	Folder		C:\VM\SharedFolder	r	Rename File	OLD	
Business Unit Exploration Geolo	DHL Logging Style	Geologist	SSTN Logo	ing Style	Stream Sediments	~	Transfer Type		
Exploration_ocolo		ocologist			ou cum_ocumento			checkin	
Available Files:			Objects in :						
File Name			Module	Object		Standalone Ta	ble	Transfer Status	
External_Checkout_DrillHole.json									
External_Checkout_DrillHole1.json									
External_Checkout_DrillHole3.json									
External_Checkout_DrillHole4.json									
External_Checkout_DrillHole4b.json									
External_Checkout_DrillHole4c.json									
External_Checkout_DrillHole4d.json									
External_Checkout2022-10-28_114627.json									
External_Checkout2022-12-16_0808302022-12	2-16T11_49_51.json								
External_Checkout2022-12-16_0834372022-12	2-16T11_46_36.json		Objects: 0						
Planned2022-12-16T12_03_56.json									
Quicklogger_Checkout_CENTRAL2022-03-30T	[15_37_04.json								
Quicklogger_Checkout_LOCAL2022-03-30T15	_15_28.json								
Quicklogger_Checkout_REMOTE2022-03-30T1	15_22_26.json								

External Transfer In window

External Transfer In window allows you to import data for drill holes, surface samples and standalone tables. Data exported from the QuickLogger app can be imported to Fusion with the help of this window.

Destination DB picklist allows you to specify the destination for the imported data.

Import Source picklist allows you to select *File*, where you then choose the **Folder** that contains the JSON files available for import, and allows you to provide an extension to **Rename File** following a successful import.

Alternatively, the source can be *Database*. This source will provide a list of Available Files from the connected database that have been inserted to the External_Transfer table from QuickLogger and the webservice. The list contents may also be filtered based on the current user and the active business unit. An enhanced profile (EXTERNAL IMPORT ADMINISTRATOR) may also impact the visible file.

Business Unit, DHL Logging Style, SSTN Logging Style picklists are not editable and reflect the properties of the chosen file. They default to the current user's active settings until a file is selected.

Transfer Type picklist allows you to specify Check In or Copy In.

An alternative to the use of the External Transfer In window is to use command line arguments that run an import silently:

/S

/EXTERNAL=QL;DSN=dsnname;AUTH=authentication;UID=userid;PWD=password;DHLLOGSTYLE=dhl_lo



ging_style;**SSTNLOGSTYLE**=*sstn_logging_style*;**BUSINESSUNIT**=*business_unit*;**IMPORTSOURCE**=*importso urce*;**IMPORTPATH=**'*pathname*';**TRANSFERTYPE**=*transfer_type*;**TRANSFERID**='*transfer_id*'

Note: all of the bold text is required, including single-quotes around pathname and transfer_id, even when not applicable/empty

DSN	dsnname	LOCAL / FUSIONREMOTE / CENTRAL
AUTH	authentication	DB / NT (user authentication)
UID	userid	User ID to connect to the DSN (empty if NT)
PWD	password	Password to connect to the DSN (empty if NT)
DHLLOGSTYLE	dhl_logging_style	Set the default active logging style for the import
SSTNLOGSTYLE	sstn_logging_style	Set the default active sample station logging style for the import
BUSINESSUNIT	business_unit	Set the default active business unit for the import
IMPORTSOURCE	importsource	FILE / DATABASE
IMPORTPATH	importpath	Foldername containing valid files for importing; empty if importsource = DATABASE
TRANSFERTYPE	transfer_type	COPY IN / CHECK IN
TRANSFERID	transfer_id	Specifies an individual file, found in importpath when importsource = FILE; specifies the ID an individual queued entry in External_Transfer table; if the value is left empty the transfer will attempt all files or queued entries, depending on the importsource



VIEW LOGS

A window that shows the logs from recent transfers can be accessed by clicking the **Data Transfer** menu.

VIEW CURRENT TRANSFERS

A slideout will appear that shows the status of the current transfer when clicking the **Data Transfer > View Current Transfers** menu item.

ADMINISTRATION

There are several windows within DHLogger that allow users to perform some administrative duties.

ं	Data Transfer 🗸 🗸 🗸
•\$•	Synchronization Settings
	Refresh Lists
	Transfer In
	Transfer Out
	Photo Upload
	Photo Download
÷	Standalone Transfer In
	Standalone Transfer Out
÷	External Transfer In
÷	External Transfer Out
	View Logs
	View Current Transfers



- View Logs
- View Current Trans
- Administration
 Calculate XYZ
 Drill Hole Authorization
 Administrator Access
 - Restore Local Database



CALCULATE XYZ

This utility allows you to update the x-location, y-location and z-location of drill hole samples of type 'ASSAY', using the collar's azimuth and dip, and the hole's coordinate values. The values are updated in the HOLE_ASSAY_SAMPLE table.

XYZ Calculator	-	×
Database		
Calculate on Local Database		
Grid Coordinates		
UTM:		~
Status		
Filter By Project]	
	0	

DRILL HOLE AUTHORIZATION

This module allows you to finalize and sign-off on the drill hole data. If configured, validation rules are executed to confirm that required data exists, that the logged data meets specific business rules, and that the hole is ready to be Authorized. The status of the hole will be changed, and it essentially becomes 'Read Only', preventing further editing. If changes need to be made to the drill hole, it can be Reopened from this same window with a change to the Authorization Action.

NOTE: The user must be granted the CERTIFIED_PERSON profile in Fusion Administrator in order to see this menu item.

rill Hole Authorizatio	n								
Ŕ	a								×
Begin Selection Criteria	Print Find	Sort Filter							Close Windov
Database Selectio	n Authorization Act Authorize	tion ~							
Project Number	Hole Number	Start Date	End Date	Logged By	Original Creator	Current Owner	Status	Is Master	Authorized Processes
DM_2017	DM_2017-Demo-0004	Feb 19, 2018	Feb 21, 2018		admin	admin	MIXED	Y	N
DM_2017	DM_2017-Demo-0005	Feb 22, 2018	Feb 24, 2018		admin	admin	MIXED	Y	N
DM_2017	DM_2017-Demo-0006	Feb 25, 2018	Feb 28, 2018		admin	admin	MIXED	Y	N
DM_2018	B18-01	Feb 02, 2021		admin	admin	admin	CHECKEDOUT	γ	N
Drill holes: 4									



ADMINISTRATOR ACCESS

From this window, an Administrator can modify the Original Creator, Current Owner, Status and Is Master values for drillholes. Since these are fields that are typically handled by the application itself depending on the actions taken on the drill hole, it is critically important that the Administrator understand the consequences of their changes, and ensure that status changes in one database are properly considered for versions of the same holes in other databases (so that one doesn't end up with multiple 'master' versions of the same drillhole).

NOTE: In order to see this menu item, either the ADMINISTRATOR profile or Role_Century_Admin granted to your user.

	Hole Number	Start Date	End Date	Logged By	Original Creator	Current Owner	Status
DM_2017	DM_2017-Demo-0003	Feb 22, 2018	Feb 24, 2018		admin	✓ admin	COPY
DM_2017	DM_2017-Demo-0004	Feb 19, 2018	Feb 21, 2018		admin	admin	MIXED
DM_2017 D	DM_2017-Demo-0005	Feb 22, 2018	Feb 24, 2018		admin	admin	MIXED
DM_2017	DM_2017-Demo-0006	Feb 25, 2018	Feb 28, 2018		admin	admin	MIXED
DM_2018 B	B18-01	Feb 02, 2021		admin	admin	admin	CHECKEDOUT

RESTORE LOCAL DATABASE

This menu item is available only to the 'admin' user, and it will replace your Local Database with one that exists in the database of your choosing. Below is the confirmation message shown when selecting this action.





PREERENCES

There are several windows within DHLogger that maintain preferences for various parts of the application.

≣	Preferences	~
÷	User Preferences	
÷	System Preferences	
	Change Language	
¢	Core Photo Storage Configuration	

USER PREFERENCES

The User Preferences window allows the user to specify their active business unit and logging styles, mouse behavior in DHLogger, default modules when starting the applications and general email settings for email notifications.

The User Preferences window is available from the **Preferences > User Preferences** menu.

User Preferences - admin						×
User Information						
Active Business Unit Exploration_Geology	A ~ 0	Active - DHLogger Geologist	~	Active - Sample Station Stream_Sediments	~	Active - MineMapper 3D
Double Click Behaviour						Email
Numeric Fields (Calculator)		Date Fields (Calendar)		Text Fields (Keyboard)		Settings
Display Properties				Table Status Header		
Geology Log Scaling	Autosize Column V	Vidths Highlight	Interval Related Rows	Rectangle Colour	Text Colour	
						Example
Default Modules						Standalone Table Behaviour
DHLogger	s	ample Station		Fusion Administrator		New From - Copy Child Data
	~		~		~	Prompt ~
Profiles						
Application		Profile				
DHLOGGER	ADMINISTRA	ATOR				
DHLOGGER	LOG AGAINS	ST CENTRAL AND REMOTE				
			ОК	Cancel		



User Information

•Active Business Unit: This is the business unit used by DHLogger for the current user if multiple business units are assigned to the user.

•Active - DHLogger: The active logging style used by DHLogger for the current user if multiple logging styles are assigned to the user.

•Active - Sample Station: The active logging style used by Sample Station for the current user if multiple logging styles are assigned to the user.

•Active MineMapper 3D: The active logging style used by MineMapper 3D for the current user if multiple logging styles are assigned to the user.

Double Click Behaviour

•This section identifies if the calculator, calendar, or keyboard is displayed when the user double clicks each of the different field types.

Email

•Settings button to define email settings for email notifications within DHLogger.

Display Properties

•Geology Log Scaling: Determines if the Major/Minor Geology Log is scaled relative to the smallest interval or each interval will display with a default height

•Autosize Column Widths: Autosizes the column widths in each grid style window to adjust to the size of the data in the field

•Highlight Interval Related Rows: In interval-related tables, the rows that do not belong to the currently selected major/minor will be highlighted in gray

Table Status Header

•Settings to configure the appearance of the header that displays the table's status in the Drill Hole Folder.

Default Modules

• Defines the default module to open automatically when the specified application starts up.

Standalone Table Behaviour

•New From - Copy Child Data defines how to process the child data during a 'New From' action on a parent standalone record: ALWAYS copy, NEVER copy, or PROMPT for user decision

•NOTE: Modular Samples will not be copied, since they must be unique in the database

Profiles

• A visual list of profiles currently assigned to the logged in user.



SYSTEM PREFERENCES

The System Preferences window allows the user to specify program and file locations, default values or the appearance of data entry forms among other things.

The System Preferences window is available from the **Preferences > System Preferences** menu.

DHLogger								x
General Dis	play	Custom Tables	GPS					
	-	_	_		-			
Drill Hole Defaults								
Hole Type:		Location:		Casing:		Core Storage:		
DD	•	Surface	•	Left in Hole	•	Mine Site	•	
Unit of Measure:		Unit of Degree:		Logged By:				
METRIC	•	DECIMAL	•		-			
					_		_	=
Grid Settings								
Conversion Method:		Common Grid:		Second Common Grid:		Third Common Grid:		
CSMAP	-	LOCAL:	•		-		•	
Data Table Settings								
	_	_	_		_			
Inherit Interval Depths	Inherit Interval Depths for Custom Tables			Warn when entering Samples that cross Lithology boundaria				
		_	_	_		_		
Project Settings								
Hide Closed Projects								
								-
			OK	Cancel				
			UK	Cancer				

The System Preferences window is divided into four tabs.


General
 The General Perferences tab is used to set drill hole default field values, identify coordinate conversion settings, general table and project settings, and lab import defaults.
Display
•The Display tab contains properties on how the samples and custom tables are displayed.
Custom Tables
•This tab grants quick access to commonly used table and column properties for custom tables.
GPS
•This tab contains connection configuration for using a GPS with DHLogger.

CHANGE LANGUAGE

Changing the language in one application will affect the language, on the user's machine, in all the GDMS applications (Sample Station, DHLogger, Fusion Administrator).

The Change Language window is available from the **Preferences > Change Language** menu.

Language	
English	~
-	
OK	Cancel

CORE PHOTO STORAGE LOCATION

This configuration window will set the default location where the core photos that you import will be renamed and saved in individual folders for each drillhole.

This window is available from the **Preferences > Core Photo Storage Configuration** menu.

Core Photo Storage Configuration	×
Local - Photo Storage Location	
Core Photo Storage Location C:\ProgramData\Datamine\GDMS\CorePhotos	
OK Cancel	



CUSTOMIZE YOUR ASSAY SCREEN

From this window you can drag and drop the sample columns into the order desired. Alternatively, you can manually enter a display order number, where 0 implies not visible.

This window is accessible from the Drill Holes window, **Options > Customize your Assay Screen** menu.

Ag_gpt_Lab 1 Au_gpt_Lab 2
Au_gpt_Lab 2
Cu_Per_Lab 3
Sg_gcm3_Calc 4



OTHER OPTIONS

There are several utilities within DHLogger described in the section that follows.

PRINTER SETUP

A quick window to select the default printer.

AUDIT LOG

	(C)					>	<
Selection Criteri	a	iner rege					
		~	>		× R	etrieve all on open	
	~		~				(
Common Aud	it Log	O Object Audit Log			· ·		
Date	Module	Activity Type	Activity Text	User	User Prompt	User Response	Au
lan 13, 2020	Lab Import	File Import	Import to LOCAL	admin	Lab import to LOCAL database (SUD00035_DEMO.csv) complete.		
an 13, 2020	Lab Import	Data Check	Replace Samples	admin	Sample No: DM_2018-Demo-0009-004File Name: SUD00035_DEMO.csv	replace all files	
an 13, 2020	Lab Import	Dispatch Check	Missing Information	admin	Sample Dispatch Number is blank.Do you want to continue importing?	ContinueByPreference	
Nov 28, 2019	Lab Import	File Import	Import to LOCAL	admin	Lab import to LOCAL database (SUD00035_DEMO.csv) complete.		
Nov 28, 2019	Lab Import	Data Check	Replace Samples	admin	Sample No: DM_2018-Demo-0009-004File Name: SUD00035_DEMO.csv	replace all files	
Nov 28, 2019	Lab Import	Dispatch Check	Missing Information	admin	Sample Dispatch Number is blank.Do you want to continue importing?	ContinueByPreference	
Nov 28, 2019	Lab Import	File Import	Import to LOCAL	admin	Lab import to LOCAL database (SUD00035_DEMO.csv) complete.		
Nov 28, 2019	Lab Import	File Import	Import to LOCAL	admin	Lab import to LOCAL database (SUD00035_DEMO.csv) complete.		
Nov 28, 2019	Lab Import	File Import	Import to LOCAL	admin	Lab import to LOCAL database (SUD00035_DEMO.csv) complete.		
Nov 28, 2019	Lab Import	Data Check	Replace Samples	admin	Sample No: DM_2018-Demo-0009-004File Name: SUD00035_DEMO.csv	replace all files	
Nov 28, 2019	Lab Import	Data Check	Replace Samples	admin	Sample No: DM_2018-Demo-0009-004File Name: SUD00035_DEMO.csv	replace all files	
Nov 28, 2019	Lab Import	Data Check	Replace Samples	admin	Sample No: DM_2018-Demo-0009-004File Name: SUD00035_DEMO.csv	replace all files	
Nov 28, 2019	Lab Import	Dispatch Check	Missing Information	admin	Sample Dispatch Number is blank.Do you want to continue importing?	ContinueByPreference	
Nov 28 2010	Lab Import	Dispatch Check	Missing Information	admin	Sample Dispatch Number is blank.Do you want to continue importing?	ContinueBvPreference	

This window, accessible from the **Other Options > Audit Log** menu, allows you to view an audit trail (record) of certain activities.

There are two categories of audit logging, which is stored in two different database tables:

- Common Audit Log, which tracks user decisions during Lab Import (continue with import despite warnings), Batch Authorization (status changes), Deletion of data (drillholes or surface samples), Authorizing data (drillholes, surface samples, processes)
- Object Audit Log, which tracks data changes, including old and new values, in objects that have been re-opened

Selection Criteria has been added to this window to assist with retrieval of the information that is most pertinent.

DRILL HOLE COSTING

The Costing module is available to track costs related to a project. There are many Costing Lists that can be customized to make use of this module to fit your needs. The entry of data is typically performed in the Central, so even while logged in to DHLogger to the Local Database, it attempts to make a connection to the Central DB.

The Costing module can be accessed under the **Other Options > Drill Hole Costing** menu.



PROJECTS

Projects are used to group database records according to specific criteria. For example, a project may encompass all drilling done by a company in an entire country. Conversely, it may encompass as little as a few holes on a mine sublevel. Normally however, projects are set up to correspond to a mine property.

The Project window can be used for maintaining project records and drill holes. The Drill Hole Collar module should be used to access the detailed drill hole information.

The Project window can be accessed under the **Other Options > Projects** menu.

ojects									
			Notice to						X
Selection Criteria	Deleve	PIIN	PIOJECIS	Dill Holes	Frenous Page	NEXT P	aye		Close window
Projects									
Project Number	Project Name	c	reated Date	Created B	у	Status	Hide Project	Polygon	
DM_2017	Datamine 2017	Ja	an 02, 2018	admin		OPEN			
Projects: 2									>
Drill Halas									
Drill Holes									
Hole Number	Hole Type	Logged By	Original	Creator	Status	ls Master	Checkedout C	Computer	
Drill Holes: 0									
Drill Holes: 0			Add Drill	Hole De	lete Drill Hole				

Project list window

ARCHIVED HOLES

This window lists the Archived drill holes in the database – those that are archived during the Re-Log or Depth Adjustment process. The ability to restore tables or entire holes is available from this window. Since holes with a status of ARCHIVED are transferred automatically during any drill hole Transfer In, it is best to view the Archived holes and perform the Restore process when the hole is Checked In to the Central database.

This window is opened from the **Other Options > Archived Holes** menu.

3/31/2023



BATCH RE-LOG HOLES

The Batch Re-log module is an extension of the Re-Log Hole utility that exists when editing a drill hole. This module allows you to select multiple holes to identify tables that you want to re-log. An archived drill hole is created for each of the selected holes, and the current holes have the selected tables cleared – ready for new data to be entered.

	Project Number	Hole Number	Table Name	Table Relation
	DM_2017	DM_2017-Demo-0003	Coordinate	Drill Hole
	DM_2017	DM_2017-Demo-0004	Survey	Drill Hole
	DM_2017	DM_2017-Demo-0005	Lithology	Interval
	DM_2017	DM_2017-Demo-0006	Custom_ALTERATION	Drill Hole
	DM_2017	DM_2017-Demo-0007	Custom_CORE_RECOVERY	Drill Hole
	DM_2017	DM_2017-Demo-0008	Custom_LITHOLOGY	Drill Hole
<		>	Custom_MAG_SUS	Drill Hole
< .og:		>	Custom_MAG_SUS	Drill Hole

The Batch Re-log module can be opened from the **Other Options > Batch Re-Log Holes** menu.

The holes you see may depend on the projects you have access to, and the tables you see may depend on your logging style.

DRILL PATH

This utility is provided to create a path for the drill hole using the Collar Azimuth and Dip, Coordinate, Intervals, Direction, and a specified interval length. It calculates the azimuth, dip and northing, easting and elevation at each interval along the drillhole's path. The calculated values can then be exported, printed, or saved to DHL_DOWNHOLE_PATH.



Drill Path Results								-
Hole Number	Depth	Start Length	Length	Azimuth	Dip	Northing	Easting	Elevation
DM_2017-Demo-0003	0	o	2.000	144.500	-62.500	5885373.511	593395.973	1415.467
DM_2017-Demo-0003	2.000	2.000	2.000	144.500	-62.500	5885372.759	593396.509	1413.693
DM_2017-Demo-0003	4.000	4.000	2.000	144.500	-62.500	5885372.007	593397.046	1411.919
DM_2017-Demo-0003	6.000	6.000	2.000	144.500	-62.500	5885371.255	593397.582	1410.145
DM_2017-Demo-0003	8.000	8.000	2.000	144.500	-62.500	5885370.504	593398.118	1408.371
DM_2017-Demo-0003	10.000	10.000	2.000	144.500	-62.500	5885369.752	593398.654	1406.597
DM_2017-Demo-0003	12.000	12.000	2.000	144.500	-62.500	5885369.000	593399.191	1404.823
DM_2017-Demo-0003	14.000	14.000	2.000	144.500	-62.500	5885368.248	593399.727	1403.049
DM_2017-Demo-0003	16.000	16.000	2.000	144.500	-62.500	5885367.496	593400.263	1401.275
DM_2017-Demo-0003	18.000	18.000	2.000	144.500	-62.500	5885366.744	593400.799	1399.501
DM_2017-Demo-0003	20.000	20.000	2.000	144.500	-62.500	5885365.993	593401.336	1397.727
DM_2017-Demo-0003	22.000	22.000	2.000	144.520	-62.497	5885365.241	593401.872	1395.953
DM_2017-Demo-0003	24.000	24.000	2.000	144.560	-62.490	5885364.489	593402.408	1394.179
DM_2017-Demo-0003	26.000	26.000	2.000	144.600	-62.483	5885363.736	593402.944	1392.405
DM_2017-Demo-0003	28.000	28.000	2.000	144.640	-62.477	5885362.983	593403.479	1390.631
DM_2017-Demo-0003	30.000	30.000	2.000	144.680	-62.470	5885362.229	593404.014	1388.858

BOREHOLE PATH

The Borehole Path utility provides an alternate path calculator with the ability to specify some additional options, add points and wedges. Again, it uses Collar Azimuth, Dip and Coordinate, and Direction information to calculate a path that can be exported.

Calculator Calculator Print Wedge Point						
ole Number Interval Length En M_2017-Demo-0003 2 1	nding Depth					
Original Path I li intervals O First O First and La	Calculated Parast	th O First	and Last	Coordinates Original	O Common	
ole Number	Azimuth Dec			Dip Dec		
M_2017-Demo-0003			144.50			-62.
orthing 5,88	Easting 5,373.51		593,395.97	Elevation		1,415.4
Original Path Data	Calculated Pa	ath				
Original Path Data Depth Azimuth Dip Flag Test Type	Calculated Pa	ath angth Azimuth	Dip North	ning Easting	Elevation	_
Original Path Data Depth Azimuth Dip Flag Test Type 0.00 144.5000 -62.5000 OK <	Calculated Pa Depth Le	ath angth Azimuth 2.00 144.50	Dip North -62.50 5,885,37	ning Easting	Elevation 1,415.47	
Depth Azimuth Dip Flag Test Type 0.00 144.5000 -62.5000 OK COLL 21.00 144.5000 -62.5000 OK REFLEX	Calculated Pa	angth Azimuth 2.00 144.50 2.00 144.50	Dip North -62.50 5,885,37 -62.50 5,885,37	ning Easting 3.51 593,395.97 2.76 593,396.51	Elevation 1,415.47 1,413.69	
Depth Azimuth Dip Flag Test Type 0.00 144.5000 -62.5000 OK COLL 21.00 144.5000 -62.5000 OK REFLEX 51.00 145.1000 -62.4000 OK EZ-SHOT	Calculated Pa Depth Le 0.00 2.00 4.00	Azimuth 2.00 144.50 2.00 144.50 2.00 144.50	Dip North -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37	ning Easting 3.51 593,395.97 2.76 593,396.51 2.01 593,397.05	Elevation 1,415.47 1,413.69 1,411.92	
Depth Azimuth Dip Flag Test Type 0.00 144.5000 62.5000 OK COLL 21.00 144.5000 62.5000 OK CREFLEX 51.00 145.1000 62.4000 OK EZ-SHOT 81.00 143.9000 62.7000 OK REFLEX	Calculated Pa Depth Le 0.00 2.00 4.00 6.00	Azimuth 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50	Dip North -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37	ning Easting 3.51 593,395.97 2.76 593,396.51 2.01 593,397.05 1.26 593,397.58	Elevation 1,415.47 1,413.69 1,411.92 1,410.14	
Depth Azimuth Dip Flag Test Type 0.00 144.5000 -62.5000 OK COLL 21.00 144.5000 -62.5000 OK CREFLEX 51.00 145.1000 -62.4000 OK EZ-SHOT 81.00 143.9000 -62.7000 OK REFLEX 111.00 144.8000 -62.5000 OK EZ-SHOT	Calculated Pa Depth Le 0.00 2.00 4.00 6.00 8.00	Azimuth Azimuth 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50	Dip North -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37	ing Easting 3.51 593,395.97 2.76 593,396.51 2.01 593,397.05 1.26 593,397.58 0.50 593,398.12	Elevation 1,415.47 1,413.69 1,411.92 1,410.14 1,408.37	
Dip Flag Test Type 0.00 144.5000 -62.5000 OK COLL 21.00 144.5000 -62.5000 OK CREFLEX 51.00 145.1000 -62.4000 OK EFLEX 51.00 143.9000 -62.7000 OK EFLEX 11.00 144.8000 -62.5000 OK EZ-SHOT 150.00 142.6000 -61.5000 OK EZ-SHOT	Calculated Pa Depth Le 0.00 2.00 4.00 6.00 8.00 10.00	Azimuth Azimuth 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50	Dip North -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37	Ing Easting 3.51 593,395.97 2.76 593,396.51 2.01 593,397.05 1.26 593,397.58 0.50 593,398.12 9.75 593,398.65	Elevation 1,415,47 1,413,69 1,411,92 1,410,14 1,408,37 1,406,60	
Diginal Path Data Depth Azimuth Dip Flag Test Type 0.00 144.5000 -62.5000 OK COLL 21.00 144.5000 -62.5000 OK CREFLEX 51.00 145.1000 -62.4000 OK EZ-SHOT 81.00 143.9000 -62.7000 OK EZ-SHOT 11.00 144.8000 -62.5000 OK EZ-SHOT 150.00 142.6000 -61.5000 OK EZ-SHOT 171.00 144.6000 -61.8000 OK EZ-SHOT	Calculated Pa Depth Le 0.00 2.00 4.00 6.00 8.00 10.00 12.00	Azimuth 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50 2.00 144.50	Dip North -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,37 -62.50 5,885,36 -62.50 5,885,36	Ing Easting 3.51 593,395.97 2.76 593,396.51 2.01 593,397.05 1.26 593,397.05 0.50 593,397.58 0.50 593,398.12 9.75 593,398.65 9.00 593,399.19	Elevation 1,415.47 1,413.69 1,411.92 1,410.14 1,408.37 1,406.60 1,404.82	



CALCULATE COMMON COORDINATES

Convert all the coordinates from their original grid to the common grid(s) from this window.

Calculate Common Grid Coordin	nates	×
Information		
Click the 'Calculate' button to b Elevation data contained in this	begin re-calculating your 'common' grid s database will be re-calculated based o Second Common Grid:	coordinates. All Northing, Easting and on the selected 'Common Grid' values. Third Common Grid:
UTM-10N	✓ LOCAL:	~ UTM: ~

HELP ABOUT

Indicates the version, database version, build date and copyright information.

LATEST NEWS

The new landing page in DHLogger, opens by default when the application starts, but can be overwritten in User Preferences in the Default Module picklist. This Latest News page can also be viewed from the menu item. It contains a jump-point to recently updated drill holes, a tips section, and a link to the latest Fusion news from Datamine Software.

Did 2017 Dama 0002	Tadau	Latest News Resou	rces Contact	
DM_2017-Demo-0006	Today			
DM 2017-Demo-0004	Today			<u> </u>
DM_2017-Demo-0005	Today	C FUSION		Fusion Archive
		Fusion is the ultimate data reposite configurable templates that capture geophysical, geochemical, downho and sample data. This ensures tha location for all exploration and prod Fusion is fully scalable and can be regional and global databases dep work processes.	ory solution with completely all geological, geotechnical, le survey, mapping, QAQC t there is one central and safe luction data. flexibly configured into local, ending on your company and	Fusion Archive allows you to consolidate your authorized data into a seperate SQL Server database. Thus helping increase software/database performance as your fusion Central and/or Fusion Remote databases grow. The Archive database can be accessed using Report Manager so that you can run queries, perform QAQC checks, or run reports. Archived data can also be re-opened and transferred back to your Central or Fusion Remote database for further editing. Contact your local Datamine Office for more information
		Who uses Fusion? Core Loggers, Geologists, Qualified Pers	sons, and Database Managers	
		Our latest release <i>FusionX</i> is loaded	d with a number of key enhancen	nents including:
ack your planned drill hole information anned Drill Hole module. Once a plan utomatically transferred to the core dr sers can then start logging additional i	n using our dedicated ned hole is drilled, it is Il hole table where nformation.	FusionX FusionX New!! Local Database The ASA Local database LocalDB). This will help solve complete	e Replacement type will be replaced by a lighty nectivity limitations with 3rd party	weight Microsoft SQL Server database (SQL Server Express y applications and also help increase the general performance of



CENTRAL DATABASE UTILITIES

The following are utilities that are accessible in DHLogger when connected to the Central database.

RESET SAMPLE RESULTS

This utility is for clearing the assay results for Global and Size Fraction samples. Doing this reset will allow for a re-import of results that otherwise would be prevented when the "results_received" flag has been set to "Y".

Accessed from the **Sample Analysis > Reset Sample Results** menu.

QC GENERATOR

This module is used to generate a group of samples and standards while ensuring that a certain number of blanks and standards are created depending on the number of non-QC Samples.

Accessed from the **Sample Analysis > QC Generator** menu.

ORIGINAL BUSINESS UNIT MAINTENANCE

This window is used to set or modify the Original Business Unit.

The original business unit is used during the opening of a drillhole when comparing the user's current business unit with the original business unit. When the drillhole is initially created, and data is entered, a set of business rules is used to validate the data being entered. If you then open the drillhole with a different business unit, and attempt a save, there is the potential that the current business unit has different rules for validation, which may cause errors.

A second usage of the original business unit is determining whether the data can be checked out (shared) with other business units. There is an option in the Business Unit window and a setting in the DHLogger.INI file that prevents users from other business units from checking out drillholes created in a business unit that does not allow sharing.

Accessed from the **Administration > Original Business Unit Maintenance** menu.

DESTINATION COMPOSITOR

The Destination Compositor is a module used to create calculations across samples with the ability to specify various parameters (such as Dilution, TopCut, Equivalence Factor), customize columns, create adjustment columns, and customize execution of calculations with formulas. The module is customized in Fusion Administrator, and is accessed in DHLogger (Central) by users that are granted the DESTINATION COMPOSITOR profile.

Accessed from the **Other Options > Destination Compositor** menu.



METAL PRICES

This window maintains a list for metal prices - storing the price, date and source.

Accessed from the **Sample Analysis > Reset Sample Results** menu.

INVOICES

This is a simple Invoice module used to keep track of sampling costs. In addition to data entry screens, there is a Report Viewer that contains some standard reports: Lab Invoice Report, Lab Total Costs, Lab Turn Around.

Accessed from the **Other Options > Invoices** menu.